

BATTLES

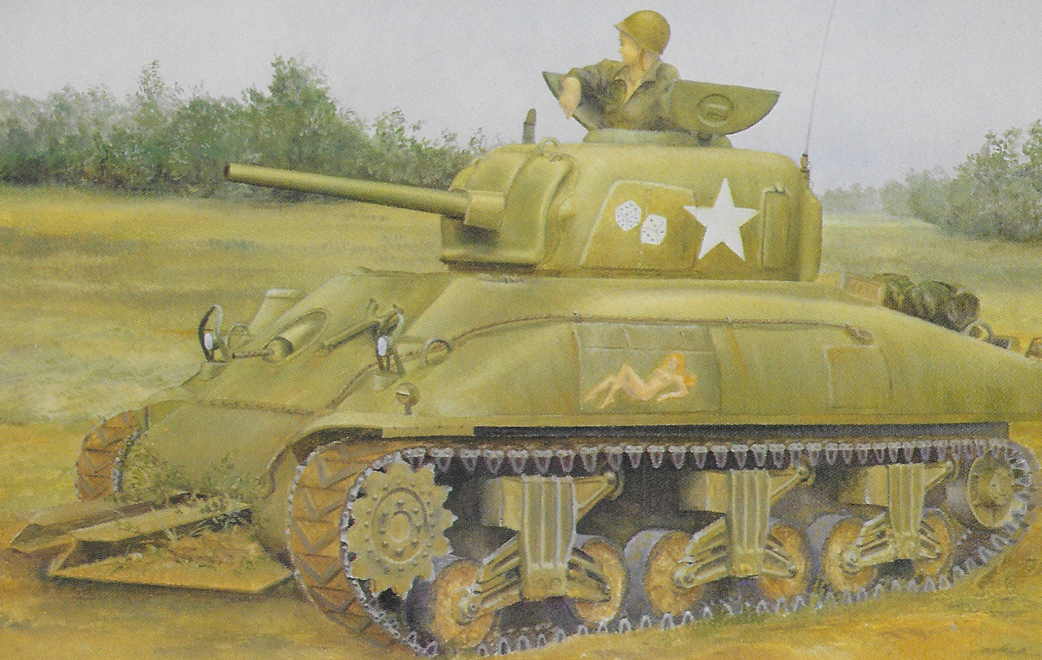
in NORMANDY

JUNE-JULY 1944

ROGER KEATING • IAN TROUT • MALCOLM POWER
ANDREW TAUBMAN • EDITED BY GREGOR WHILEY

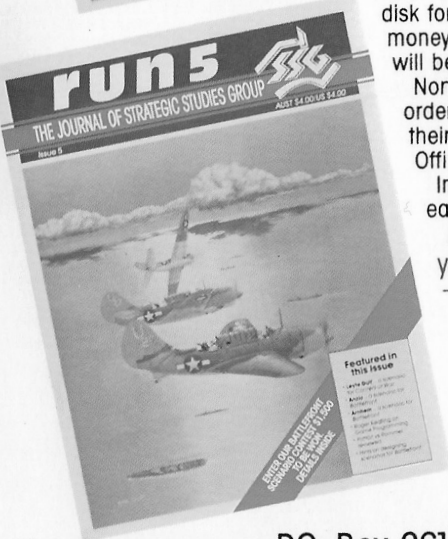
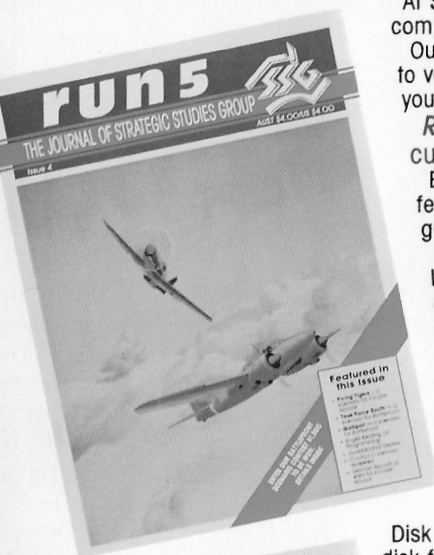
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PART ONE

THE GAME ROUTINES

1. INTRODUCTION

Battles in Normandy recreates the Allied invasion of Normandy and the fighting around the beach-head that followed. It uses the Battlefront Game System and contains eight complete scenarios to illustrate aspects of the Normandy battles. The Battlefront Game System allows the simulation of any corps level combat from World War Two. Like its predecessor **Battlefront**, **Battles in Normandy** has a complete design kit which allows you to vary existing scenarios or create new ones.

Part One of this manual, **The Game Routines**, contains an introductory tutorial and explains all you need to know to play the game. Section 10, **Scenario Notes**, contains an historical article for each scenario as well as comprehensive Player's Notes. Part Two, **The Design Routines**, explains the design kit and how to use it.

Since **Battles in Normandy** uses the Battlefront Game System, owners of **Battlefront** will find no real change in how they play the game. There are some slight refinements, mainly in the design options and all differences are noted in that section of the manual.

The complete package consists of an album, a map, 2 menu cards, a floppy disk, this player's manual and a strip of save game labels.

If this isn't the case, let us know about missing components, or return defective ones, and we'll replace them immediately. If you live in North America, send defective components to our US Office; if you live elsewhere, send them to our Australian Office.

Furthermore, if you have any questions relating to the play of the game, please address them to our Australian Office, regardless of where you live.

2. HOW THE GAME PLAYS

Before asking you to go through the introductory tutorial, we recommend you read this chapter.

A game of *Battles in Normandy* goes something like this.

Choose the scenario you wish to play. Experienced players may wish to vary an existing scenario or to create an entirely new one.

Choose a handicap level for the game. Handicap levels in *Battles in Normandy* act as a multiplier on the points accumulated by either player. They do *not* affect the artificial intelligence or the combat performance of the protagonists.

Choose whether the game will be played between two humans, one human (either as the Axis or Allied player) or no humans. Note the <OBSERVE> mode is a very useful tool for historical analysis and for testing original scenarios.

The game is now ready to play.

Each scenario lasts for a set number of turns; up to 63. There are four turns to each day (am, noon, pm and nite) so that the maximum length of a scenario is 16 days.

The military forces at your command are battalion size units. These are your basic fighting men. They are organized into larger formations to reflect a proper military hierarchy. A regiment can have up to four component battalions. A division can have up to four component regiments as well as up to four independent battalions. These independent battalions can be temporarily attached to any of the division's regiments.

Finally, each player can have under his command up to three divisions, for a total of 60 battalions. This is the corps formation that you are commanding. There are fourteen different types of battalions ranging from standard infantry, armour and artillery types to airborne, engineer, anti-air and anti-tank, assault gun and tank destroyer.

The battlefield on which you fight is a field of hexagons up to 39 across and 28 down. The ground scale is approximately 1 km (0.63 miles) per hex. Different types of terrain are represented by different terrain icons. Roads and cities are shown. Places of special significance are designated as objective hexes, and victory points are awarded for control of these at different times in the game.

It is your job as a Corps Commander to use this time, these forces and these conditions to capture and hold as many of your objectives as you can, to destroy as many of the enemy battalions as you can get your hands on and, of course, to prevent your opponent from doing this to you. The player who has scored the most number of points by the end of the game is the winner.

Your interface with the game is a structured set of menus which really do become very easy to use. Trust me!

These menus give you the power to manoeuvre and deploy your battalions, to send them into battle and to refit and re-organize them when necessary. Although each individual fighting unit is a battalion, battalions are grouped together to receive and carry out orders as regiments. Remember, each regiment consists of up to four battalions and can have a further four battalions attached to it. As corps commander you issue a general order to each regiment. Every battalion attached to that regiment, including any battalions assigned from the divisional reserve, will then execute the order.

Only one battalion can occupy a hex at the end of a turn. This does not prevent them moving through each other when executing your orders.

It is vital to realize the command separation between you and a battalion. From your lofty height in the chain of command, you have no control over the location of individual battalions. They will position themselves in order to best carry out your orders.

You can examine a variety of reports which will provide the information to base your decisions on.

Air strikes and naval bombardments are represented by a variable amount of support points. These can be allocated to help out any regiment, both in attack and defense.

All orders are issued before any action takes place. Combat between opposing forces is resolved and described by a short report. Other orders are then executed.

Each scenario is accompanied by a short briefing which will give you some idea of what must be accomplished in order to win.

On average you can expect a scenario of ten days length to take 90 minutes to finish in solitaire mode; a little longer if your opponent is human.

3. YOUR FIRST BATTLE

It is the 5th of June 1944. Tomorrow the British 3rd Infantry division will go ashore at the Normandy beach code-named SWORD. Tonight, in an act that heralds the invasion proper, the 6th Airborne division will drop into occupied France and seize a bridgehead over the River Orne.

In this tutorial, you will be playing the part of Lt. General Crocker, commander of the British I Corps. Your job includes the capture of Caen, the key to Normandy. As you follow the tutorial, we'll get you started.

As well as this rulebook, you'll need to have in front of you the game map and to have located the appropriate area for the *Sword* scenario. Use the start/game menu card appropriate for your computer.

Starting Up

Start up your computer using the procedure given on the start side of the menu card. Menu A (Start Up Menu) appears to the right of the title page. As is the case with every menu in the game, you use the arrow keys to locate your choice from the menu and then type (RET) to select it.

If you select the wrong menu, don't worry. Type (ESC/f1) to go back to the previous menu.

Hit the right arrow key a few times. Now hit the left arrow key and you'll see the cursor moves in the opposite direction. Every menu works the same way.

Selecting the Sword Scenario

Before we can start play, we have to select the Sword scenario, tell the computer that we will control the Allied forces and decide whether we wish to use a handicap.

Use either arrow key to locate the <GAME> line and type (RET) to go to Menu B (Location Select).

Use an arrow key to locate the <SCENARIO> line and type (RET) to go to Menu C (Scenario Menu).

Use an arrow key to locate the <SWORD> line and type (RET) to go to Menu E (Edit Utility). The scenario briefing screen is displayed to the left of the menu window.

Use an arrow key to locate the <EDIT> line and type (RET) to go to Menu F (Handicap Utility). We must now decide whether to use a handicap. Since this is only a tutorial and not the real thing, we will give ourselves as much help as we can get. The handicaps below the <NO EFFECT> line benefit the Allies, those above benefit the Axis.

Use an arrow key to locate the <MAJOR> Allied line and type (RET) to go to Menu G (Player Select). Locate the <ALLIED> line and type (RET). The cursor has been thrown into the briefing screen and you have the opportunity to change the commanders' names. Do this if you wish, otherwise type (RET) until you get back to Menu E (Edit Utility).

Have a last look at the briefing screen and you'll see the Allies have a major handicap advantage, the Axis forces will be run by the computer and the Allied forces will be run by human hands.

Use an arrow key to locate the <START> line and type (RET) to go to Menu H (Game Master).

That's the preliminaries over with. We're just about ready to play.

Turn your menu card over to the game side.

The icons which represent the battalions and headquarters on the screen are illustrated on the following page.

The First Turn

Back to Menu H. A current turn briefing appears to the left of the menu window. This scenario starts on the night turn with the landing of the paratroopers. Thus it is turn 4 of 23. The game is started at this time as a matter of convenience. You may consider the first three turns to have occurred without anything having happened. Subsequent lines tell you the time of day and the date, the atmospheric weather and the expected weather forecast. The better the weather, the more reliable your air support will be. Precipitation will usually slow down troop movement.

The <AXIS> and <RUN 5> lines in the menu have been overprinted with a solid bar to show that you cannot access them. The solid bar will disappear from the <RUN 5> line after the <ALLIES> line has been accessed. This is to guard against accidentally selecting <RUN 5> before issuing your orders. The <AXIS> line will always be overprinted during the game. The computer does not want you to see what it is doing!

The procedure for running a night turn is slightly different to a daytime turn, but this is the best place to learn about it.

Locate the <ALLIES> line and type (RET). As it is a night turn, you have gone to Menu 2 (Night Operations). On a night turn you must select <ACTIVATE> before you can access the <ORDERS> menu. This is a safeguard against inadvertently issuing orders to your men when they should be sleeping. We will do this when it comes time to issue orders.

Examine the map shown on the screen. What you see is Sword beach and the mouth of the River Orne. Below the map is a summary of your corps identity and the victory points you have accumulated to date.

Reviewing Your Forces

Before issuing orders we'll review our forces, examine the battlefield, the objectives and the enemy forces.

Select the <REPORTS> line to go to Menu 4 (General Reports). This is just a branch menu. Select the <STATUS> line to go to Menu 5 (Unit Status).

The name of each of your divisions appears beside its I.D. code in the menu window. Select the <DIV 1> line (6th Airborne Division). This screen displays the status of an entire division at a time. Two brigades have landed and the rest of the division is due at some time tomorrow. The men who have landed are tired or exhausted, reflecting the disorganized nature of the airdrops.

SPECIFIC BATTALION ICONS

(VISIBLE ONLY TO CONTROLLING PLAYER)



LEG INFANTRY



MOTORIZED INFANTRY



MECHANIZED INFANTRY



PARACHUTE



HEAVY WEAPONS



CAVALRY



RECONNAISSANCE



DIVISION HQ



ENGINEER



ANTI-AIR



ANTI-TANK



TANK DESTROYER



ARMOUR



ASSAULT GUN



ARTILLERY



DIV HQ (AX/AL)

GENERAL BATTALION ICONS

(VISIBLE TO BOTH PLAYERS)



ALLIED INFANTRY



ALLIED ARMOUR



ALLIED ARTILLERY



ALLIED ROUTED



PARACHUTE MODE



AXIS INFANTRY



AXIS ARMOUR



AXIS ARTILLERY



AXIS ROUTED



AIR LANDING MODE



AMPHIBIOUS MODE

A NOTE ON MONITORS AND SOUND

If you are using a black and white monitor, type
Cntl(B) to enter monochrome mode.

If you don't wish to listen to the sound effects, type
Cntl(S) to turn them off.

Repeat the keystroke to reverse the effect.

The status screen is quite useful and should be consulted about once a day to get an overview of the condition of your troops.

Type (ESC/f1) twice to return to Menu 4. Select the <OBJECTIVE> line. The cursor will rest on one of your objective hexes, the town of Douvres, close to the beach. The text summarizes the turns for which Victory Points are received, the number of VPs per turn, and any VPs awarded for control at the end of the game. Douvres at this time is Axis controlled.

The arrow keys will cycle through all of your objective hexes. Use them now to look at all of your objectives to gain an idea of your overall requirements for winning the game. Check this screen often as the game progresses to make sure you are on track.

Consider the display in the bottom right of the screen. The solid area is the overall map size. The smaller white box represents the location of the hexes currently on the screen. As you move the cursor to different parts of the map, the small box will move to show the relative location of the current screen against the overall map.

Issuing Orders

Type (ESC/f1) to bring up Menu 2 and select the <ACTIVATE> line. This will allow access to the <ORDERS> line. Select this to bring up Menu 9. The job of the paras is to hold a bridgehead over the Orne until the regular infantry arrives. Some elements have been sent to blow other bridges or deal with coastal batteries, so battalions are scattered at the moment. We will attempt to consolidate them.

Select the <DIV1> line to bring up Menu 10 and then select <REG ORDER> to bring up Menu 14. You can see that 3 and 5 Brigades are in reserve and that the other two regiments are still Off Map. Select the <REG 2> line to bring up Menu 15.

The flashing cursor indicates that the regiment is in the <READY> state. This fact determines what sort of orders we can give. Select the <OB> line. The arrow keys will cycle the cursor through the component battalions of the regiment. We can see that all three are tired, elite troops who have taken no losses. This status will not last!

The <OB> line is always available from this menu. Use it to keep up with the location and condition of the battalions in each regiment.

Type (ESC/f1) to return to Menu 15 and select the <READY> line to bring up Menu 17. This is the menu with the actual orders for a regiment in the <READY> state.

We will tell our men to drive inland to expand our bridgehead. Select the <OBJECTIVE> line and use the arrow keys to cycle through them until the woods hex <RANVILLE> is on the screen. Type (RET) to confirm the order and return to

Menu 15. The men have been ordered to advance on the chosen objective. The other regiment can stay where it is for the moment. Hopefully it will recover some of its fatigue.

The Computer's Role

Type (ESC/f1) four times to return to Menu H, the Master Game Menu. If you think all is ready select <RUN 5>. Combat and movement will then occur. The Germans may not attack on this first turn but, if they do, you will get the appropriate combat reports. Hit the space bar to continue after each report.

After the first turn is finished you will be returned to Menu H. It is now turn 5 and the morning of D-Day. We will have a lot to do today!

The Second Turn

From Menu H select <ALLIES> then <ORDERS> then <DIV 1> then <REG ORDERS> then <REG 1>. The Airborne regiments are virtually certain to be <ENGAGED>. (If they are only <CONTACTED> issue <SUPPORT> orders to consolidate the bridgehead).

Choose <ENGAGED> and then select the <DELAY> line. We wish to concentrate the regiment. Most battalions will still be tired and they will have no line of supply (LOS) as the Divisional HQ does not arrive until turn 6. These are not good circumstances under which to attack. We will try to hold the enemy in place instead.

Issue a <DEFEND> order to REG 2. Then select REG 4 (1st Special Service Brigade), the lead element of which is off the beaches. Use the <READY> line and then <OBJECTIVE> to send them to Ranville as well.

We have given orders to all three of our available regiments from DIV 1. We can now allocate the vital support points from air and naval bombardment which will be a big help in holding off the Germans.

Type (ESC/f1) twice to return to Menu 10. Select the <SUPPORT> line to bring up Menu 13. The cursor will be flashing against the <REG 1> line and the text will show that you have 30 out of 30 support points to allocate. Allocate 15 points to REG 1 by typing (15)(RET). Your support points will now read 15 out of 30. allocate the other 15 to REG 2

This will be the last time you enjoy such luxury. The next turn should see most of both divisions embroiled in conflict and all crying out for those off board support (OBS) points. Careful allocation of support points will play a large part in successful play.

Type (ESC/f1) twice to return to Menu 9. Select <DIV 2> then <REG ORDER> then <REG 1>. It is waiting off the beaches and will be in a <READY> state.

Select <READY> and then <OBJECTIVE>. Use the arrow keys to find the Hilltop <HILLMAN>. This is an Axis strongpoint that must be cleared to allow the advance on Caen. The longer it holds out the stronger the Axis reinforcements will be. Send REG 3 to <DOUVRES> to give the widest possible frontage.

We have now issued orders and allocated support for the second turn. Type (ESC/f1) until you return to Menu H and select <RUN 5> to process turn 5.

The Third Turn

In the noon turn (Turn 6) REG 1 from <DIV 2> should be <ENGAGED> at or about Hillman. This position will probably not be taken easily so we have to be methodical. Choose <ENGAGED> then <ATTACK>. This will show a range of attack options. Choose <PREPARE>, which is a limited attack which will set the stage for a full scale assault next turn. REG 2 will now be waiting off the beaches. Select <REG 2> then <READY> then <ENEMY II>. The arrow keys will now cycle around all enemy battalions within 8 hexes. Pick a likely lad close to the beaches and hit (Ret). Give REG 3 a <PROBE> order.

Issue half of the available support points to DIV 2, giving almost all to REG 1.

The two para brigades engaged with the enemy should be given defend orders and the rest of the support points.

The P.M. turn can be quite tricky. The Germans will often assault along the river, trying to reach the bridge. They must be stopped from doing this. You have fresh troops arriving, including a glider regiment which must be committed to bar the way. Given good weather you can blast the Germans out of the way over the next two days or so. However, if the Germans capture the bridge your para brigades will be cut off from their HQ and supply. You cannot afford this to happen.

As well as defending with the paras, you must not neglect your infantry assault on the Germans on and around Hillman. They must be moved or you'll never get to Caen. A final word of advice and then you're on your own. If the weather turns nasty and takes away your OBS points, try and arrange for a spot of sick leave. That way someone else gets the blame.

4. THE TYPES OF GAME MENUS

The order menus which drive the game can be divided into four types.

(a) **Branch Menus** - These menus signpost the route to other menus [1,2,4,9,10,14,15]. Note that most of them also provide some information.

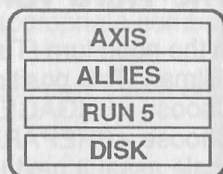
(b) **Information Menus** - These menus provide specific information on the various forces and functions in the game [5,6,7,8,16].

(c) **Action Menus** - These menus are the centre of the game system. All of the orders used in the game are given through them [11,12,13,17,18,19,20].

(d) **Single Function Menus** - [3].

5. THE GAME MENUS DESCRIBED

Menu H (Game Master)



This screen always appears at the beginning of each turn. It is common to both players. It is the first screen you will see after completing the scenario selection details and selecting <START>.

You are told the turn number, the time of day and date, the atmospheric weather for this turn and the weather forecast.

In a two (human) player game you will be able to select either <AXIS> or <ALLIED>. In a one (human) player game a solid bar will be overprinted across the nationality controlled by the computer. The arrow keys will not access a line overprinted with a solid bar.

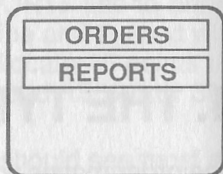
<RUN 5> is the key which activates the turn. Do not select it until all players have issued their orders.

In daylight turns, the <RUN 5> line will be overprinted with a solid bar until all players have accessed at least Menu 1.

In night turns, there is no insurance on the <RUN 5> line since it is usual (and advisable) to let your men get some sleep.

The <DISK> line can be accessed at any time and is the means by which the 'save game' routines are utilized. Please see Menu 3 (Save Game Utility) for full details of these routines.

Menu 1 (Daylight Operations)



This is a branch menu. The information which appears to the left of the menu window displays your nationality, parent unit formation, the commander's name and the number of victory points accumulated by your side to date.

You should decide whether you want to look at the available information before giving your orders.

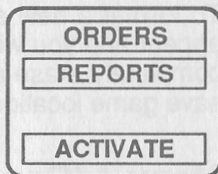
If you select <REPORTS> you will be given access to four categories of information. Menus 4-8 will give you all the details.

If you select <ORDERS> you will be given access to the decision making (or action) menus of the game. Menus 9-20 will give you all the details.

We recommend that you make use of the <REPORTS> menu every turn and then issue your orders. A list of the things you should keep an eye on is included in the description of each report menu.

Menu 2 (Night Operations)

This menu appears in place of Menu 1 (Daylight Operations) on night turns. You will recall from Chapter 3 (How the Game Plays) that each day is divided into 4 turns; am, noon, pm and nite.



In most circumstances you will want to rest your men at night. The <REPORTS> line is available for selection as usual. However, to use the <ORDERS> line, you will first have to select <ACTIVATE>. This additional key has been included as a precaution against accidentally committing your forces at night.

All men on both sides will normally sleep at night unless specifically given an order. You may carry out all actions up to actually issuing an order without waking them up. Orders issued through Menus 17-19 will activate the regiment for the night. This is the only irreversible decision you can make except, of course, selecting <RUN 5>.

You should not attack at night unless you have very good reasons. See Section 9 (Tactics).

Menu 3 (Save Game Utility)

This is a single function menu which allows you to load or save a game or to format a save game disk. Use the arrow keys to locate the <DISK> line on Menu H and type (RET). This brings up the save game utility screen which has three options, <LOAD>, <SAVE> and <FORMAT>.

To save a game, locate <SAVE> with the arrow keys and type (RET). If you have only one disk drive you will be asked to insert the appropriate disk and type (RET). You will then see a list of the games on the disk in the large catalog box at the top of the screen. Use the arrow keys to move the highlighted bar to the location in which you wish to save the game, and type (RET). The menu window now displays the <COMMENT> and <SAVE GAME> lines. Choosing <COMMENT> allows you to edit the boxes containing the name of the game and a three line synopsis, which are in the middle of the screen. When you are ready, locate the <SAVE GAME> line and type (RET).

The game will be saved to the highlighted location with whatever name you have chosen for it. Note that the catalog box displays the turn on which the game was

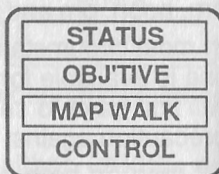
saved. This is done automatically. Hitting the (ESC/f1) key will now return you to the game. One drive users will be prompted for the appropriate disk.

To load a game choose <LOAD>. One drive users will be asked for their scenario or save game disk. Use the arrow keys to move the highlighted bar to the desired game location and type (RET). The chosen game will be loaded. Hitting (ESC/f1) will now return you to the game.

To format a new save game disk choose <FORMAT>. A warning message will appear and you will be asked to insert the disk to be formatted. Hitting (RET) will completely erase any information that was on the disk and provide eight unused save game locations. Please exercise some care in choosing this option.

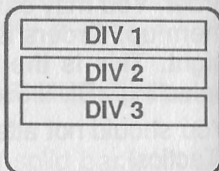
Menu 4 (General Reports)

This is a branch menu that directs you to each of the four report menus. Use the arrow keys to select the required report and then type (RET).



Menu 5 (Unit Status)

This is an information menu. Use the arrow keys to locate a particular friendly division (or formation) and type (RET). The map is replaced with a full screen text display of the current state of the chosen division. Consider fig 1.



This example shows the American 1st Division from the Omaha scenario. It is an INFANTRY division. It is turn 10.

At the top of the screen are the displays for the division assets. There are 4 in this example; the 5th (ARTillery), the 745th (ARMour), 1st (INFantry) and 81st (INFantry) battalions.

All are assigned to the 1st regiment of the division except the 81st which has been eliminated (Killed In Action). The 5th Bn has a fresh fatigue state. It has veteran troops. It has taken no losses as yet.

The remaining battalions in the division are grouped by regiment. The regimental I.D. appears inside a box on the left of the screen together with its combat state and supply state. Both of these concepts are explained in detail in subsequent menus.

Thus, the 16th regiment has 4 battalions; the 1st, 2nd, 3rd and 7th. Note that the 1st has taken 40% losses.

The value of this information is that it will give you a concise summary of the condition of every battalion in a division on a single screen. It complements the information available on the <OB> lines of Menus 17-19.

Turn (10)	3	5	ART	fresh	vet	n		
...1 XX	1	745	ARM	fresh	trn	d	10%	loss
...INFANTRY	1	1	INF	fresh	vet	n	10%	loss
		01	INF	+ KIA	+			
16 REG	1		INF	fresh	vet	n	40%	loss
ENGAGED	2		INF	fresh	vet	n		
LOS open	3		INF	fresh	vet	n		
	7		ART	fresh	trn	d		
18 REG	1		INF	fresh	vet	n		
ENGAGED	2		INF	fresh	vet	n		
LOS cut	3		INF	fresh	vet	n		
	32		ART	fresh	trn	d		
26 REG	1		INF	fresh	vet	n		
ENGAGED	2		INF	fresh	vet	n	10%	loss
LOS open	3		INF	fresh	vet	n	on (11)	
	33		ART	fresh	trn	d		

Fig 1. Division Status Screen

Menu 6 (Examine Objectives)

This is an information menu. Use the arrow keys to cycle through each friendly objective. Alternatively, you can type the name of a particular objective which you want to examine. A box will appear in the bottom left of the screen containing the name as you type it. When you have typed enough letters for the computer to distinguish a unique name, the cursor will move to that objective and the information will be displayed. The information available on each is illustrated below.

Fig 2 is an Axis report. From this example we can see that the name of the objective is CARENTAN. The cursor identifies its location. It is Allied controlled. The objective is located in a HILLTOP/TOWN hex. Twenty victory points per turn can be earned from the control of this objective between turns 4 and 43 inclusive. A further 200 victory points can be earned for the control of this objective at the end of the game. Finally, the objective has been held by the Axis for 20 turns so far in this game.

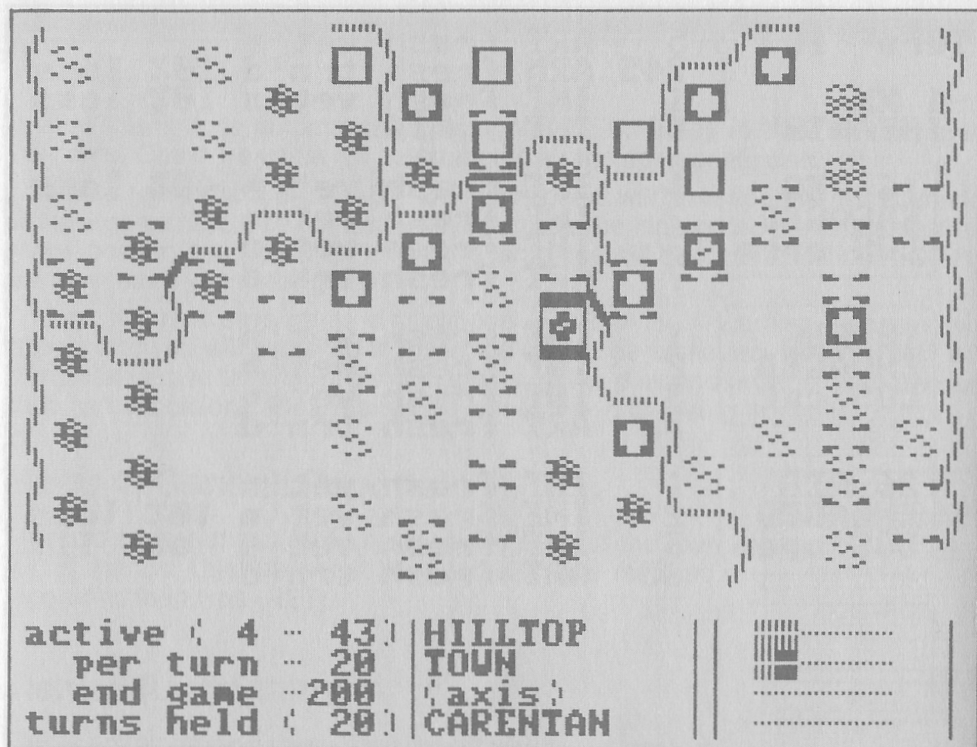


Fig 2. Objective Details

There is a schematic display of the map in the lower right which indicates the map size and the current location of the cursor in relation to the full map.

Knowing where your objectives are and their relative value to you in victory points will make it much easier for you to deploy your forces. Whenever possible, secure every objective within reach and be prepared to defend them for as long as possible.

Frequent checking of this menu will ensure, for example, that you don't defend a particular objective too long (i.e. past the expiry point for earning VPs). It will also keep you aware of when an objective needs to be secured in time to get the most VPs from it.

Menu 7 (Examine Map/Units)

This is an information menu. You are given control of the cursor which may be moved at will around the map by the use of the 1-6 keys or the I,J,K,M keys.

Friendly objectives are identified as flashing *target* symbols.

You can (and should) use this menu to get information on enemy units. It is also useful for examining terrain, especially in active portions of the map, and as another source of information on the condition of friendly units.

Position the cursor over an enemy unit. In the lower left of the screen you will be told the type of enemy unit identified (either infantry, armour, artillery or divisional HQ), whether it is contacted or not and, if contacted, an indication of the size of the enemy unit. Type (0) to centre the screen on the cursor.

In the lower centre of the screen you will be told the type of terrain occupied by the enemy unit, whether a city is present or not, who controls the hex and finally whether it is a friendly objective. If so, its name is given.

You may also position the cursor over a friendly unit. The information presented on the unit is in exactly the same format as the information available to you when you select Menu 16 (Examine Friendly Units). Please see that menu for full details.

If you position the cursor over an objective hex unoccupied by any units, you will get the same information on the objective as you received in Menu 6 (Examine Friendly Objective). Please see that menu for full details.

Finally, when the cursor is positioned over a non-objective hex and there are no units present, the information display at the bottom of the screen will describe the terrain type in the hex, the presence or otherwise of cities and which player is in control of the hex.

There is a schematic display of the map in the lower right which indicates the map size and the current location of the cursor in relation to the full map.

You may type (RET) to remove all units temporarily from the map. Type (RET) again to replace them.

Menu 8 (Examine Control)

This is an information menu. You are given the same control over the cursor as you get in the previous menu.

All terrain icons are replaced with the Axis and/or Allied control icon. Hexes containing units do not display a control icon; in almost every case a hex occupied by a unit will be controlled by that unit. Fortifications and minefields may take some time to clear. When an enemy fort or minefield has been cleared the fort or mine symbol will disappear.

You may type (RET) to remove all units temporarily from the map. Type (RET) again to replace them.

It is difficult to overstate how important hex control is in the play of the game. Units moving in friendly territory move much faster than they would in enemy territory.

In all other respects the information in this menu is identical to the information provided in the previous menu.

Menu 9 (Division Select)

This is primarily a branch menu for the selection of your divisions. To the left of the menu, the time of day and date are displayed. Underneath is a description of each of the divisions in your order of battle on the line corresponding to the division number in the menu.

DIV 1
DIV 2
DIV 3

Use the arrow keys to locate a particular division and then type (RET) to select it. Note that divisions not in play will be overprinted with a solid bar and not accessible to the arrow keys.

Menu 10 (Division Order)

This is primarily a branch menu for the selection of divisional orders. To the left of the menu, a description of the division is provided.

REG ORDER
SUPPORT
XX ASSETS
MOVE HQ

You are told the name and type of the division, the quality of its leadership, administration and supply (poor, fair, good or excell't) and a percentage estimate of total losses suffered to date.

Divisional leadership is important in combat. It remains fixed throughout the game. Divisional administration is important in regimental resupply, obtaining replacements and ease of movement. It remains fixed throughout the game, unlike regimental administration which fluctuates with the course of the battle.

Divisional supply is the major determiner of regimental resupply. It remains fixed throughout the game, unlike regimental supply which fluctuates with the course of the battle.

Use the arrow keys to locate a particular divisional order from the menu and then type (RET) to select it. Note that divisional orders which are currently not available for selection will be overprinted with a solid bar and not accessible to the arrow keys.

Menu 11 (Move XX HQ)

This is an action menu. The cursor is centred over the divisional headquarters. Friendly objectives are indicated by flashing target symbols.

Use the 1-6 keys or the I,J,K,M keys to select the location you wish the HQ to move to and then type (RET). If this location is illegal (i.e. the computer can't get

there), the error beep will sound and the cursor will return to the Divisional HQ. Otherwise, you will be returned to Menu 10 and the word <moving> will appear next to the leadership rating.

In subsequent movement phases, the HQ will move as best it can toward its objective. Once it reaches its destination, it will move no further until given a fresh order. In any subsequent turn, a new objective can be assigned to a divisional HQ. The old objective is voided and the HQ will try to move to the new destination.

A divisional HQ can have zero movement points. In this case the <MOVE HQ> selection will be permanently barred.

A divisional HQ has an important role in the game. It is the source of supply for its regiments, the administrative centre determining how efficiently supplies and replacements are delivered and a major factor in the ease of troop movement.

They are the only units in the game over which the player has direct control; i.e. which can be directed to a specific hex.

When deciding where to place a divisional HQ, keep the following points in mind.

Units given reserve orders (either regiments or battalion assets) will head for their divisional HQ and deploy once they get within three hexes of it. Regimental HQs must trace a line of supply (LOS) to their divisional HQ each turn to receive supplies and/or replacements. We recommend you keep your divisional HQs about 6-10 hexes away from enemy units and directly to the rear of friendly units. Once you've had a bit of experience with their placement, you can try something more adventurous.

A divisional HQ functions more efficiently if it is not moved. As far as possible, endeavour to keep to a minimum the number of times you must move it.

Don't forget your divisional HQs! They never move of their own volition unless they are on the edge of the map or within two hexes of an enemy battalion. You must place them where you want them. It is easy to overlook them in the heat of battle. There is nothing worse than finding your divisional HQ in the front line and realizing too late that all those troops you thought were refitting in the rear have been caught with their proverbial pants down.

It is especially important to keep an eye on your divisional HQs when you are expecting them as reinforcements. No matter what mode they arrive in they should be put somewhere safe and useful immediately. If your regiments have no LOS you should check the location of the divisional HQ.

Menu 12 (Assign Assets)

This is an action menu. Use the arrow keys to locate a particular divisional asset. If the asset is currently attached to a regiment, all battalions in that regiment will be highlighted with their specific battalion icon.

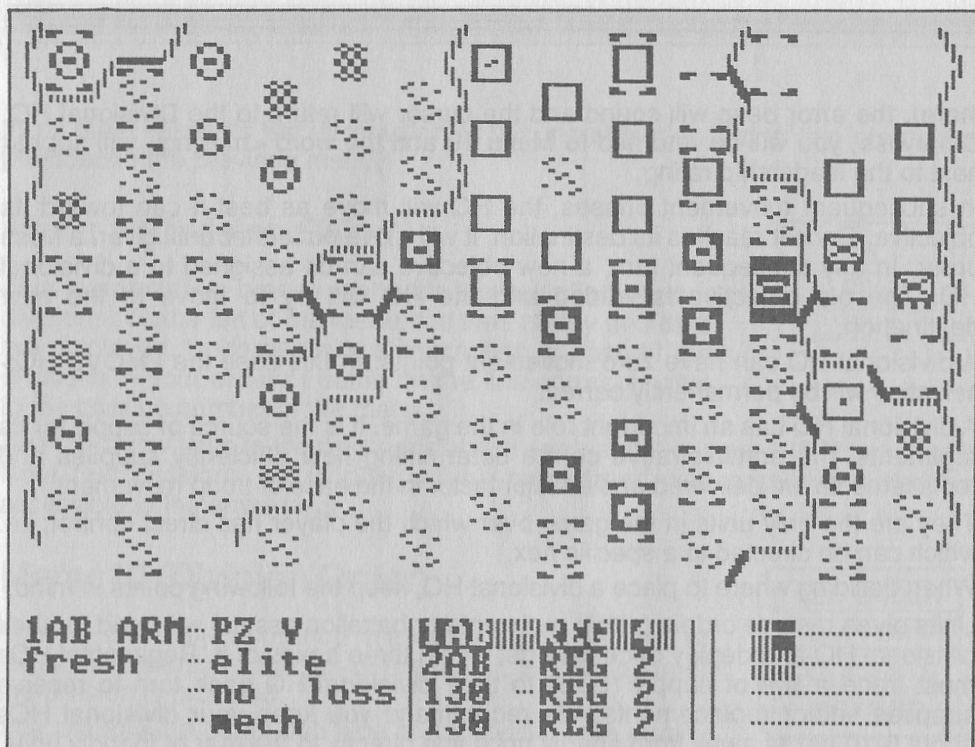


Fig 3. Division Asset Display

In the lower centre of the screen, the identities and current attachment of each asset are displayed.

In the lower left of the screen, the current state of the battalion is displayed. You are told the battalion I.D., unit type (INfantry, ARMour or ARTillery), equipment used (e.g. 45mm AT), fatigue condition (exh'd, tired, fit, fresh), experience (green, trained, veteran, elite), and percentage casualties to date.

Once you have located the chosen asset, type (RET) to select it. The battalion may either be assigned to a regiment or placed into reserve. Use the arrow keys to select between <RESERVE> and <REGIMENT>. If you select <REGIMENT>, you are then asked which one. Use the arrow keys to make your decision.

Consider **fig 3**. This example is from the Villers-Bocage scenario. The four assets of the Panzer Lehr Division and their current assignment are displayed in the lower centre of the screen. The cursor on the map identifies the 1AB Panzer battalion from the division. From the information in the lower left of the screen we can tell that this battalion is equipped with Mk V tanks, it is fresh, elite, has taken no losses and is mechanized (i.e. it uses mechanized movement costs).

Divisional assets should be allocated to the regiment/s which need them the most. In general, this will be regiments with attack orders or those in tight situations.

Each division can have up to four battalion assets. Note that the assets of one division are not transferable to another division.

The type of battalion asset is important when deciding assignments. For example, assault guns, assault engineers and artillery are very useful in attack while anti-tank guns, tank destroyers and the ubiquitous artillery will be of use in defense.

Keep a careful eye on the condition of your battalion assets. Place them into reserve when they become ineffective; i.e. their losses exceed 50% and/or they are exhausted. Battalion assets assume the supply state of whatever regiment they are attached to.

Battalion assets placed in reserve will head for their divisional headquarters and deploy once they are within three hexes of it.

The assignment of battalion assets does not become irreversible until <RUN 5> is selected. Until that point, you may return to this menu and reassign any or all of the battalion assets.

Menu 13 (Allocate Off-Board Support)

This is an action menu. The information to the left of the screen tells you the time of day, the date, the current air power situation (i.e. which player controls the air and to what degree), the number of off-board support points (OBS) which may be allocated and the number still to be allocated this turn.

Use the arrow keys to locate a particular regiment and then enter the number of support points you wish to allocate to that regiment. You can cancel an entry by hitting the space bar or by going back to the regiment and re-entering a new number. You will not be allowed to allocate more support points than you have available nor will you be able to access regiments not yet active.

Consider **fig 4**. This example is from the Villers-Bocage scenario. The three regiments of the 50th Infantry division have various attack orders. The air support is strong Allied, as it will be in all scenarios. A total of 27 OBS points are available and all have been allocated to this division.

In general, regiments with attack orders (especially assault) should get the most support. Regiments in tough/desperate defensive situations also need all the help they can get. In fact, everybody needs support and you will find there's never enough to go around.

Correctly proportioning support to your regiments will have a major effect on the outcome of most battles. Be careful not to forget that you have up to three divisions; don't allocate all your support points to just one of them without good reason.

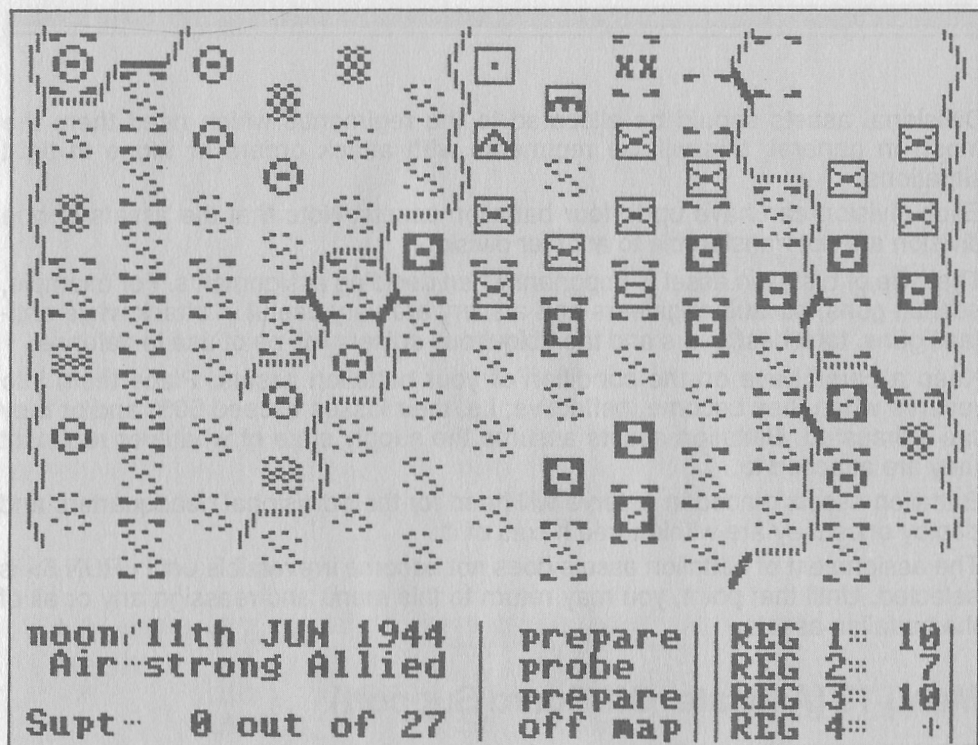
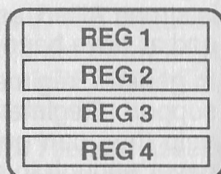


Fig 4. Off-Board Support

As with *all* the menus in this game, the decisions made here do not become final until you go back to Menu H and select <RUN 5>. Up until that point, you can come back to this menu (or any other for that matter) and re-allocate the support points as many times as you wish.

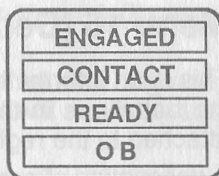
Menu 14 (Regiment Order)

This is a branch menu. Use the arrow keys to locate a particular regiment and then type (RET) to select it. Regiments not in play (either not present or future reinforcements) will be overprinted with a solid bar and not accessible by the arrow keys.



The divisional I.D. is displayed in the lower left of the screen. Each regiment's I.D. and current order appear in the lower centre of the screen on the line corresponding to their position in the menu.

Menu 15 (Regiment Action)



This is a branch menu. The information displayed to the left of the menu tells you the division and regiment I.D., the type of regiment, regimental leadership, administration and supply state (poor, fair, good, excel't) and percentage losses to date.

The regimental headquarters is attached to a single battalion from the regiment, usually the one farthest from enemy units. Throughout the game, the location of the regimental HQ will shift from battalion to battalion in response to the ebb and flow of battle.

There is nothing the player can do to affect the location of the regimental HQ. They cannot be destroyed until the last battalion from the regiment is destroyed. Note that the regimental HQ can be located with a battalion asset assigned to a regiment.

At every stage of the game, an active regiment (i.e. one with at least one battalion on the map) will be in one of three states. These are <READY>, <CONTACT> and <ENGAGED>. The computer determines which state the regiment is currently in. The current state of a regiment determines which actions it may perform; i.e. which menus it may access.

A regiment in an <ENGAGED> state is more or less *toe to toe* with the enemy. As a useful rule of thumb, a regiment will count as engaged whenever two or more of its battalions are within two hexes of the same enemy unit.

A regiment in a <CONTACT> state is in proximity to enemy units. At least one battalion is within two hexes of an enemy unit.

The enemy unit responsible for triggering an <ENGAGED> or <CONTACT> state is identified by the target icon.

In other circumstances, a regiment is in a <READY> state.

Thus, only one of the three regimental actions is available to the player. The other two are overprinted with a solid bar and are not accessible to the arrow keys.

A regiment will keep the same action from turn to turn unless you step in and issue new orders provided the combat state does not change. If the combat state does change (e.g. from <READY> to <CONTACT>), then the default actions for each of the three states are <READY> (deploy), <CONTACT> (defend) and <ENGAGED> (defend). In this circumstance, the computer will select the default action for you if you don't issue an order yourself.

The <OB> line is always selectable. It stands for 'Order of Battle' and is used to get a detailed breakdown of the condition of each battalion in the regiment, including those assigned from the divisional reserve.

Use the arrow keys to locate the available regimental action line or the <OB> line and type (RET) to select it.

Menu 16 (Detailed OB)

This is an information menu. Use the arrow to cycle through each battalion. All of the battalions in the regiment are identified by their specific unit icons. Assets attached to the regiment from the divisional reserve are also included.

A description of each battalion appears on the far left of the menu.

You are told the battalion I.D., unit type (INFantry, ARMour or ARTillery), equipment used (e.g. 45mm AT), fatigue condition (exh'd, tired, fit, fresh), experience (green, trained, veteran, elite), percentage casualties to date and supply state of their regiment (poor, fair, good, excell't).

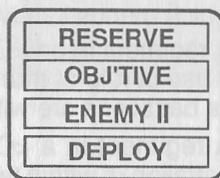
To the left of the menu, you are told the type of terrain in the hex, the presence or otherwise of a city, who controls the hex and whether it is a friendly objective.

It is a good idea to have a careful look through your OBs on the first turn and at regular intervals throughout the game. Once a regiment's average casualties start to mount, you must plan to have it relieved before a real disaster can occur.

Never forget that the worst casualty rates occur when your men are worn out, hungry and have already sustained substantial losses.

Menu 17 (Ready Action)

This is an action menu. Use the arrow keys to locate the action of your choice and then type (RET). There are four actions which may be made by a regiment in a <READY> state.



(a). Reserve. A regiment given reserve orders will attempt to move its battalions behind its divisional HQ and deploy them there. A battalion with a deploy instruction will seek out the best defensive terrain in the immediate vicinity.

A regiment in reserve is more likely to recover fatigue, receive replacements, be resupplied and to re-establish its administrative routine than a regiment in any other state. This refitting procedure will be much enhanced when the component battalions of the regiment are more than two hexes from enemy units.

The reserve state is an inefficient formation for fighting so you have to be careful when issuing this order. It is always a bit tricky to rescue a regiment from a tight combat situation. Please see the notes on the <RESERVE> action under Menus 18 (Contact Action) and 19 (Engaged Action).

Selecting a <RESERVE> state under the <READY> menu is usually pretty safe. Just make sure your divisional HQ is out of harm's way and 6-10 hexes clear of enemy units.

(b). Obj'tive. Use the arrow keys to locate the friendly objective of your choice and then type (RET) to select it. As each objective is located, information describing it

appears to the left of the menu. Please see the notes under Menu 6 (Examine Objectives) for full details.

Once an objective is chosen, the component battalions of the regiment (including any battalions assigned from the divisional reserve) will move towards it, generally selecting the quickest route.

This action is the principal means of manoeuvre for uncommitted regiments. Use it to get your men into position prior to engaging the enemy.

(c). Enemy II. Use the arrow keys to locate the enemy battalion of your choice and then type (RET) to select it. As each enemy battalion is located, information describing it appears to the left of the menu. Please see the notes under Menu 7 (Examine Map/Units) for full details. Only those enemy battalions within 8 hexes of the friendly regimental HQ battalion can be selected by this action.

Once an enemy battalion is chosen, the component battalions of the regiment (including any battalions assigned from the divisional reserve) will move towards it, following the most direct route.

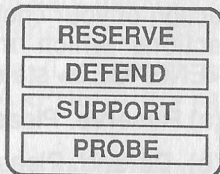
You use this action to send your men into battle!

(d). Deploy. This action is chosen in those circumstances where there are no enemy units nearby but nevertheless you wish the regiment to remain in place, presumably to counter a future threat. Individual battalions will seek out the best defensive locations in the immediate vicinity within supporting distance of each other and await your further instructions.

Remember that <DEPLOY> is the default action for the <READY> state. This means that a regiment given a <RESERVE> order while in the <CONTACT> state will revert to a <DEPLOY> order if its state changes to <READY>. You should check on the orders of battalions given <RESERVE> orders if you wish them to remain in reserve. See Menu 15 (Regiment Action) for full details.

Menu 18 (Contact Action)

This is an action menu. Use the arrow keys to locate the action of your choice and then type (RET). There are four actions which may be made by a regiment in a <CONTACT> state.



(a). Reserve. This action has the same effect as it does in the preceding menu (and the following one for that matter). You just have to be more careful when using it as enemy units will be much closer to you.

If at all possible, commit a fresh regiment to the front before withdrawing a worn out one. Sometimes this is not possible and you'll just have to hope that your men can outrun their pursuers. Remember the enemy will be operating in hostile territory while you will (hopefully) be in friendly territory.

(b). Defend. This action is basically self-explanatory. Battalions within two hexes of enemy units dig in *in situ* while others in the regiment deploy to the best defensive terrain in their immediate vicinity.

It is the safest formation and when in danger (or in doubt), select it.

Remember that <DEFEND> is the default action for the <CONTACT> state. See Menu 15 (Regiment Action) for full details.

(c). Support. This action is a more vigorous type of defense. Battalions within two hexes of enemy units will dig in as they do with the <DEFEND> action; however, all other battalions from the regiment (including those attached from the divisional reserve) will move up to support the contacted battalion/s.

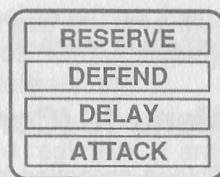
This action is chosen either to stiffen the defense of a particular sector or to assemble the regiment's components in preparation for a planned future offensive. Don't select it when you're heavily outnumbered and short of reinforcements/reserves. If you don't want anybody to move use <DEFEND>.

(d). Probe. This is the most aggressive response you can make while in the <CONTACT> state. Rather than dig in, those battalions within two hexes of enemy units immediately launch a limited attack while the other battalions from the regiment move up into supporting positions in the expectation of contributing to the battle in the next turn.

This action should not be taken unless you have considerable superiority and a pressing need for some decisive achievement or for concentration of your own men.

Menu 19 (Engaged Action)

This is an action menu. Use the arrow keys to locate the action of your choice and then type (RET). There are four actions which may be made by a regiment in an <ENGAGED> state.



(a) Reserve. Please refer to the notes in the two previous menus.

(b). Defend. Please refer to the notes in the previous menu.

Remember that <DEFEND> is the default action for the <ENGAGED> state. See Menu 15 (Regiment Action) for full details.

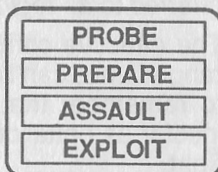
(c). Delay. If the regiment is subjected to a major attack, it will withdraw in the direction of its divisional HQ. This action will minimize losses from full scale assaults at the price of conceding ground.

Uncontacted battalions from that regiment will move up to support the engaged battalion/s.

(d). Attack. This action is not an operative command in itself. It directs you to a subsidiary menu wherein you choose the type of attack you wish to launch.

When it comes time to get the job done, you'll have to hit this key!

Menu 20 (Attack Action)



This is the ultimate action menu. The decisions you make here will be vital in determining the outcome of the battle. The type of attack you should choose will depend on the current circumstances.

The single most important thing to remember is that the <ASSAULT> action is not automatically the most effective way of destroying your opponent!

Use the arrow keys to locate the action of your choice and then type (RET). There are four actions which may be made by a regiment in an <ATTACK> state.

(a). Probe. This is a conservative and exploratory type of attack. It reduces your losses to the minimum while giving you a good idea of your opponent's strength. You won't do much damage to the enemy. Should you experience a simultaneous attack from your opponent, you will be in the best condition (given that you are attacking) to receive it. It has the same effect as a <PROBE> under Menu 18.

(b). Prepare. To all intents and purposes, this appears to be another <PROBE> attack. However, it is simply a diversion while the regiment prepares to launch a full scale assault. You will inflict the same level of damage on the enemy as you would with a <PROBE> attack but you are much more vulnerable to a counter-attack. Regiments attacked while executing a <PREPARE> order can get quite badly chewed up.

The value of this order is that it makes a subsequent assault very much more effective. You really must use prepared assaults against tough enemy opposition. A <PREPARE> done on the pm turn may be effective (i.e. assist an <ASSAULT>) on the following am turn, but this is not certain. A <PREPARE> has no bonus for an <EXPLOIT>.

(c). Assault. These are full scale attacks using every component of the regiment which is in a condition to participate. They can result in horrendous losses for both sides. Make sure you allocate as much off-board support and as many divisional assets as you can spare. Every little bit helps!

(d). Exploit. This type of attack should be launched against a weak enemy position. It gives the attacker the greatest opportunity to advance after the fighting. It will only be truly effective if your opponent is KIA'd or routed. Do not use it against a tough enemy position; your losses could well reach unacceptable levels.

6. THE COMBAT ROUTINES

There are two types of combat in *Battles in Normandy*. For convenience, they are referred to as *regimental combat* and *minor combat*.

The effective combat radius of all units is 2 hexes, regardless of type. Certain ranged units can be effective up to 15 hexes from their target. It is quite important to remember that the exact positions of the opposing battalions matter only insofar as battalions must be within 2 hexes or within range of an enemy unit to fight.

A battalion under attack can receive support from friendly battalions within 2 hexes (or range) of itself. Battalions with the same regimental I.D. are much more likely to provide support. Try to keep your regiments as concentrated as possible.

As a result of combat, battalions will lose strength points and become fatigued. They may even rout if the battle goes too badly against them. For any given combat state, the higher the experience of a unit the less likely it is to rout. Elite troops are very hard to shift.

Routing battalions are readily identified on the screen by their distinctive icons. The supply, and to a lesser extent the admin, values of the regimental HQ are reduced in proportion to the intensity of the battle.

Whenever a regiment executes an attack order you will receive a report providing you with the details. Losses will be specified as Light, Medium or Heavy. This represents the strength point loss as a proportion of current strength and is thus a relative measurement. Attackers losses are calculated on the total strength of all attackers.

The combat report also shows the orders for attacker and defender and if OBS is allocated it is described as Light, Medium or Heavy (LGT, MED, HVY). The order descriptions are more precise for one or zero player games.

Fatigue losses are not shown in the combat report but you should check on them through the various status reports. You must hit the space bar to proceed.

Consider **fig 5**. The battalion under attack is identified by the target icon. It is an Axis battalion from an AD HOC regiment of a composite division. It has a <defend> order. It is being attacked (using a <PROBE> order) by the 506th Rgt of the American 101st Airborne Division. Unsurprisingly, the Axis took heavy losses; the Americans sustained no losses. The Axis had no OBS while Allied OBS was heavy.

In addition to the regimental battles displayed in the combat reports referred to above, all other opposing units adjacent to each other are subject to the *minor combat routine*. The results of this routine are not displayed on the screen. Battalions may suffer fatigue and/or strength point losses as a result of minor combat.

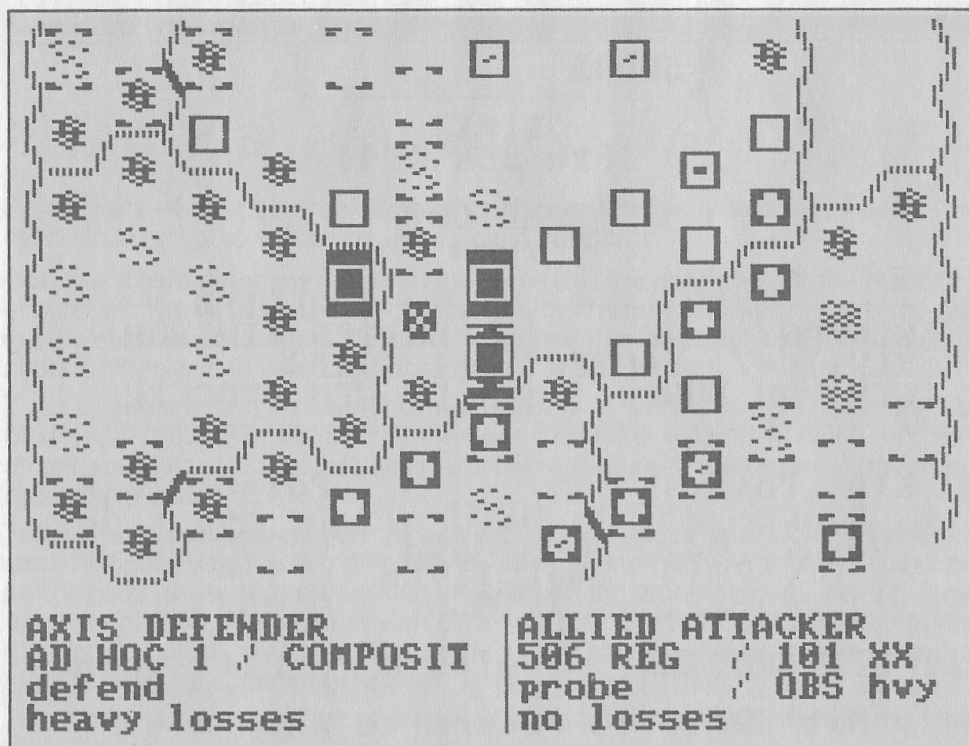


Fig 5. The Combat Report

The higher the experience level of a battalion, the more damage it can cause and the less it takes from minor combat. Adverse factors for minor combat are lack of supply, high fatigue and high numbers of adjacent enemy units. Only routed units can actually be KIA'd in minor combat.

7. THE MOVEMENT ROUTINES

Once the last combat report has been displayed, the movement routines are activated. The computer determines in which order the regiments will move. This is based on admin, experience, supply, leadership, current order and a small random component.

If necessary, the movement routine will be divided into a series of *pulses*. This is to ensure that no single battalion moves more than 4 hexes (or 8 along a road) before every battalion has had a chance to execute its order.

SWORD

(TIME)
10th JUN 1944

(HANDICAP)
even

AXIS

GERMANY
XLVII (47) PANZER
GEN VON FUNCK

ALLIED

UNITED KINGDOM
1 CORPS
LT GEN CROCKER

KIA	Points
(4)	(8)
(83)	(83)
	(731)
	(822)

MECH
NON MECH
OBJECTIVES
TOTALS

Points	KIA
(84)	(42)
(55)	(55)
(924)	
(1063)	

LT GEN CROCKER wins by (241) points
Hit (RET) to return to main menu

Fig 6. The Victory Screen

The menu window will display the word <running> throughout the duration of the movement routines. The screen will centre on each regiment as it moves. Once all movement is complete, the turn is over and the next turn will begin.

8. WINNING THE GAME

The game will end with the completion of the movement routine on the last turn. It is always a pm turn.

The victory screen will appear and summarize the players' performance. Fig 6 shows a typical result.

This example is from the *Sword* scenario. The Axis have destroyed 4 mechanized SPs and 83 non-mechanized SPs. The Allies have eliminated 84 mech SPs and 55 non-mech SPs. The Axis have accumulated 731 VPs for the control of

9. TACTICS

Some parts of the game are so vital to playing it properly that they need to be specified in one place. They are **combat** and **supply**.

Combat. There are many factors in the game that are considered in the resolution of combat. The most important of these are the fatigue state, casualty level, and supply state of the troops. Deficiencies in any one of these areas can make a serious difference to combat performance.

Tired or exhausted men cannot fight effectively. A combat result can cause loss of strength, fatigue or both. Thus men can lose fatigue points in combat in both attack and defence. Repeated assaults without a break will cause extra fatigue and supply losses.

Fatigue is recovered best at night by sleeping, and attacking at night will certainly cause fatigue losses and should only be done where really necessary. There are some good reasons for attacking at night. These would include having large amounts of OBS, the fact that your opponent's air power makes attacking during the day difficult, or having so many men that you can afford to have some attack at night to keep up constant pressure.

Regiments in reserve will recover fatigue much faster than regiments in any other state and tired units should be placed in reserve to allow more rapid recovery. Attacking with units that are tired or exhausted invites disaster.

Units lose effectiveness as their casualty level mounts, over and above the actual loss of strength points. Any battalion with over 20% casualties is a definite candidate for reserve, and units with over 50% are not very useful.

Casualty levels are not the absolute totals of killed and wounded. Rather they reflect the lowering of the number of men willing and able to effectively fight the enemy. Most of the casualties will not be hurt at all but are out of contact, cut off, confused or leaderless, pinned down or otherwise ineffective.

Putting such a unit in reserve will allow re-organization and replacement and will eventually restore it to a reasonable fighting condition. A unit committed and taking too many casualties may break and rout. A routed unit is no longer effective as a fighting force and will usually retreat towards its divisional HQ.

Routed units may not be targeted for normal combat but will suffer additional losses if they are adjacent to enemy units. Any unit suffering overwhelming casualties may simply cease to exist for game purposes. Such a unit is noted as KIA and disappears from the game.

Supply. The toughest unit is helpless without bullets and useless without food. The regimental supply level is used for combat purposes. Its likelihood of replenishment is related to its current order (reserve is best, assault is worst), the divisional HQ supply value and both HQs' admin values.

The divisional HQ supply and admin values do not change! If these are low you have to be extra careful in selecting an attack philosophy. Although a regiment may start with decent supplies, resupply will be a chancy procedure. Attacks use a lot of supply, so avoid unnecessary combat.

Each regimental HQ must trace a line of supply to the divisional HQ to establish resupply for each regiment. You will be told if the LOS is open or cut. If it is cut, you may have to move your regiment or your HQ or both. Placement of the divisional HQ is critical.

As a special concession to amphibious operations, regimental HQs can trace supply to divisional HQs located offshore, i.e. showing the special landing craft icon. Once the HQ has landed the normal rules apply.

Terrain prohibited to mech units and the presence of enemy units can also block supply. If your LOS is blocked you cannot afford to wait too long before unblocking it.

How to Win

A few principles to help you avoid disaster are set out below.

Keep a reserve. Your div HQ has to be about 6 hexes away from the enemy to make this possible. If you don't have that room, fight like crazy to create it. Don't commit your reserve until you have made provision for a replacement.

Use the right men for the job. Historically, the best formations got more than their share of tough jobs, for very good reasons. You will find those reasons equally compelling.

Give the right job for the men. Even inferior troops who are strategically on the defensive can and should attack, at least occasionally. Judicious use of probes will cause extra fatigue and supply losses to the attackers. They will probably win anyway but be in worse shape after the victory than if a purely passive defense had been maintained. If your probe catches an attacker during a prepare he will certainly suffer.

Manage your assets. In one sense all your troops are assets and your job is to use them correctly. The divisional assets provide a useful illustration of this. They should be checked every turn to ensure that they are being used in the most efficient manner possible. The techniques for managing them successfully apply to the rest of your troops. Apply those consistently and you'll be hard to beat.

PART TWO

THE SCENARIOS

THE NORMANDY CAMPAIGN

The Normandy campaign remains an area of enduring military interest. The few months of fighting which bear the name brought together a fascinating collection of military issues, a total examination of which is outside the scope of this game.

Nevertheless we believe it appropriate to provide an overview, setting out the basis for SSG's view of the campaign. This is, after all, the thinking behind all of our scenarios.

The popular conception of Normandy is one of total success. The Allies storm ashore, as told in *The Longest Day* and establish their beach-head. After some tough fighting they win on all fronts, liberate Paris and unleash Patton in the general direction of Germany.

The truth is somewhat different. The Allied conduct of the war is best described as strategic success and tactical failure. For the Germans the opposite is true.

When we talk about success or failure we are talking in relative terms. If an operation calls for the taking of an objective and this is not done then, by its own terms, the operation is a failure, though it may have accomplished other worthwhile goals. Similarly, if it is said that a particular unit performed poorly, it means that it achieved less than it would have hoped to have done, or was required to do.

The strategic success of the Allies is undeniable. The planning and execution of the invasion itself was a military marvel. Only Omaha beach and the airborne drops were not well done, and those problems eventually sorted themselves out though at some cost. However, by the evening of June 6th, the Allies were ashore and established. Their main fear, of a bloody repulse on the beaches, had not been realized.

From there on the Allies expected it to be straightforward. They had overwhelming air and ground support and a massive advantage in men and materiel, at least in England. Since the Germans were not in a position to hinder reinforcement of the beach-head, there was nothing that could really stop the Allies building up and breaking out.

This situation was the result of German strategic failure. With abysmal intelligence, poor planning, cumbersome control structures and the demented hand of Adolf Hitler behind everything, they were in poor shape. Huge amounts of precious resources were wasted fortifying coastline outside of fighter range from England that was never going to be invaded.

The Allied Operation FORTITUDE, meant to convince the Germans that the invasion would take place in the Pas de Calais was a complete success and German units were held back from Normandy until well after D-Day. German reaction on D-Day was slow and confused and nowhere was there a real danger of the Allies being stopped on the beaches.

That the Allies were unable to exploit this strategic supremacy for over two months is the salient fact of the Normandy campaign. How could an under equipped and under strength Wehrmacht, with a mixed collection of men and facing complete air supremacy hold off the Allies? To understand why, we must look at a tactical comparison of the two armies.

Tactically, the Allies got it wrong almost every time. With the exception of artillery, they were outclassed in every single type of weapon. Their leadership and doctrine were inferior at all but the highest levels and their troops did not have the same authority on the battlefield as the Germans.

The Sherman tank, while a superbly reliable piece of machinery, was not designed with its opponents in mind. Its gun could not penetrate the armour of a Panther or Tiger except at close range. Its armour could not withstand a round from either of these, or a MK IV, or an 88 anti-tank gun, at almost any range. British tanks, with the exception of the Firefly, (a Sherman with 17 pdr gun) were worse.

The German field machine guns were able to fire at twice the rate that the comparable Allied weapons could. They were also allocated more generously to the infantry units. Thus a small number of Germans were able to generate enormous amounts of fire power.

The German mortars were their field artillery. Their ability to quickly and accurately call down mortar fire was legendary. It is estimated that up to 75% of Allied infantry casualties in Normandy were caused by mortars. The famous Nebelwebers (a six-barreled mortar) were dreaded by all the units that came up against them.

The Panzerfaust was a one-shot infantry-portable anti-tank weapon. It was accurate and very powerful; Allied troops captured and used them whenever possible. The American bazooka was too weak to penetrate the armour of most German tanks, and the British PIAT was inaccurate and very short-ranged.

And, of course, the deadly German 88 dual purpose gun stood them in good stead throughout the campaign. Accurate, high velocity rounds flew along absolutely flat trajectories to their targets. The only Allied weapon to come close was the British 17 pounder, but of course a towed anti-tank weapon is not much use in attack - it needs to be mounted on a vehicle for that. All too few were.

Each of the Allied armies got one aspect of their infantry training wrong. For the Americans, it was their junior leadership. The lieutenants tended to lead from the rear; as a result the men often did not develop the trust essential for good performance on the battlefield.

The NCOs were usually kept in the dark about any particular operation; thus as soon as communication with higher units was lost (as it so often was in the hedgerows), there was no direction in the small units.

For the British, it was an almost complete lack of armour/infantry co-operation. Each regiment was an entity unto itself; on numerous occasions one regiment was unable to help another in the same division. Time and again, operations were planned so that the tanks would race out ahead of the infantry. Consequently, they would then get cut to pieces by anti-tank gun screens that only infantry could deal with.

While the Allies had plenty of air support, it took them a long while to use it properly for close support of ground troops. It is one thing to interdict the enemy in rear areas, which the Typhoons and Thunderbolts did with a will. To bomb targets only a few hundred yards from your own troops, on request, requires a great deal more organization and co-operation. This was slower arriving than it should have been.

Tactically, the Germans possessed an efficient fighting machine, with excellent doctrines of leadership and infantry/armour co-operation, which stood them in good stead until the last weeks of the war. Every man had the training and information to do the job of the man above him, so that when an officer was lost the whole unit did not grind to a halt.

When a German division was destroyed (as they often were), the remnants would stay in the field as a Kampfgruppe. Divisions were pulled out to refit when severely damaged, so that the new men were leavened by a cadre of veterans who could teach them the tricks and subtleties of modern warfare. The Allied practice of feeding replacements into a unit while it was still in battle meant that many were killed before they acquired the necessary combat experience to survive.

Why were things so different? Even in 1944, the Wehrmacht was the most professional Army in the world. It had correct combat doctrine, immense discipline and the necessary training and command structures to ensure that this endured. Contrary to the stereotype of the Teutonic robot, it was the master of battlefield improvisation. Properly led, even second and third rate German troops were competent opponents.

The British were showing the strains of their long fight. The Americans had expanded a regular Army of 190,000 men to over eight million and there simply were not enough experienced or properly trained men to go around. These problems were not the fault of the average Allied soldier, who was often let down by those above him. It must be stressed that under very difficult conditions Allied morale fluctuated but never broke. Finally, of course, it was the Germans who were ground down and driven from the battlefield.

What conclusions can we draw from the events depicted in *Battles in Normandy*? Certainly, both sides could have done better - hardly a unique situation in warfare. Fundamentally, the German strategic failure meant that the Allies could not lose in Normandy. The Allies' preponderance of men and materiel, and their absolute superiority in air and sea power meant that eventually they must prevail. Their tactical failures meant that they would pay a needlessly high price for doing so.

1. OMAHA

The landing on Omaha beach was to be the major effort of the US forces in the initial stage of the Allied invasion. The veteran 1st US Infantry division - the famous 'big red one' - was assigned the task of the initial landing. The green 29th division was also to land on the first day, as well as the 2nd and 5th Ranger battalions.

Omaha undoubtedly possessed the most formidable natural defences of any of the D-Day landing beaches. Immediately behind the beach was a small sea wall; past that steep cliffs rose up to 200 feet. The cliffs were pierced by a few well-defended roads. Despite some indications to the contrary, the Allied Intelligence believed that the beach was only defended by one regiment of the weak 716th division. In fact, the reliable 352nd was also present in strength. The men of the 1st and 29th divisions faced the most powerful enemy forces of any of the landings.

The view presented to the defenders of Omaha beach in the early morning of June the 6th is one that they would never forget. There were ships as far as the eye could see - literally. The invasion fleet consisted of 9 battleships, 23 cruisers, 175 destroyers and 6,483 troop transports of varying sizes.

The pre-invasion bombardment was particularly ineffective at Omaha. The Liberators were bombing through heavy cloud, and, anxious to avoid the invasion fleet, pounded the open fields behind the coastal defences with great ferocity. The naval gunfire was no more effective - the bunkers were invulnerable to all but the largest shells.

General Gerow, commanding V Corps, had chosen to forgo the specialized British armour, as well as any attempt at tactical subtlety. He ordered his men to

attack the most heavily defended sections of the beach. The only advantage the Americans had was the 64 amphibious Sherman tanks that were to swim ashore with the first infantry units.

The first waves of infantry landed on time, and mostly at the right place. The Germans could scarcely believe that the enemy were going to swim ashore right under their muzzles. Many landing craft were hit by the heavy German artillery fire that started as they approached the shore; others got caught up on the obstacles planted in the water for that very purpose. Often, as the landing ramp was lowered, machine-gun fire scythed into the dense clumps of men before they could leave the boats. Many stepped into deep water and, weighed down by 30kg packs, disappeared instantly.

The Shermans were launched into seas far worse than they were designed for. Of the 32 allocated to the 1st division's sector, only five reached the shore - the rest were swamped and sank like stones. Most of the 29th division's tanks reached the beach, but ten were destroyed immediately. The rest could not proceed past the sea wall, which was supposed to have been breached by engineers driving 16 armoured bulldozers. Only three made it ashore, one so covered in infantry seeking cover that it could not move.

The engineers whose task it was to demolish the obstacles in and out of the water found that their intended targets were being used as shelter. The Germans would let the engineers set a charge, then explode it with machine gun fire before they could get away. By mid-morning, serious thought was being given to abandoning Omaha and diverting the remainder to the British beaches, or to Utah.

Finally a hole was blasted in the sea wall, and the heavy naval support began to take its toll on the defenders. The infantry infiltrated in small groups, realizing that to stay on the beach was to invite certain death. They worked their way into the ravines and gullies behind the beach, and took on the German strongpoints one by one. Terrible as the US casualties were, every man that dropped was replaced by two more, whereas every German lost meant a gap in the defences.

By midday the US forces were firmly established ashore. The village of Vierville had been taken, and the nests of German resistance were being winkled out. The sole counter-attacking force available to the defenders had been sent to investigate a reported paratroop landing in the Isigny area, tricked by the use of dummies being dropped by parachute, with firecrackers simulating gunfire. It was hours until the errant regiment could be contacted and turned around - hours too late. Had a serious counter-attack gone in before noon against the GIs huddled on the beach, the day would almost certainly have been lost to the Allies. The dummy parachutists had been worth their weight in gold.

Once the American divisions had cracked the thin crust around the beachhead, they were able to advance more rapidly. By the 10th of June, the 1st division had moved up to 15 km south, crossing the Aure river and linking up with British forces at Bayeaux. The 29th division had taken Isigny on the 8th of June, and was

approaching Carentan from the east by the 10th. For a few hours in the morning of June the 6th, two thirds of the American effort on D-Day balanced on a knife-edge. Eventually, the superiority in manpower and materiel, combined with the tenacity of the rangers and 1st division, won the day for the Americans. But it had been a near-run thing.

Scenario Notes

This is one of the smaller scenarios in the package, with 19 turns and only 2 divisions on each side. It takes about 15 minutes to play through the scenario, with the computer playing both sides.

It starts on turn 1 of June 6th, and goes on till June 10th.

The continuous line of cliff and fort around the beach may look artificial, but it accurately depicts the situation the Americans faced. Some of the Germans have been broken up into companies to reflect the fragmented nature of the defence, and the ability of small units to hold large frontages in this situation.

Player's Notes

AS THE ALLIES, you have some good men (the 1st division) and some not so good (the 29th). Your primary aim is to take the towns to the west: Isigny, Grandchamps and the hex To Carentan. You must clear the beaches to a reasonable depth (4-6 hexes) as soon as possible, then strike west with your best units.

AS THE GERMANS, you have to contain the Americans as long as possible. You have excellent defensive terrain on your side; every turn you keep the Americans on the beach adds to the congestion there, and delays the inevitable push to the west. It is worth sacrificing units to hold the beach.

Many of your victory points are in the centre of the board, so you can do well even if the American does breakout to the west - *if* you have the men to hold the centre.

Scenario Variants

1. Assume the 915th regiment of the 352nd division had not been decoyed away by the dummy paratroops. Give it three battalions, by copying from the 914th regiment, but increase the strengths to 9 each. Place the new regiment within two hexes of Longueville.

2. Assume that the preliminary bombardment had been more effective. Remove the forts from the map and decrease the strength of the units in them by 1 each.

3. Let all the rangers land at Point du Hoc, as originally planned. The rangers are

the fourth regiment of the 29th division. Move the second and third battalions of that regiment to location 11,0.

4. The design section of the rulebook contains an example in which some of the Pz Lehr arrives at Omaha on turn 2. Use it. This is good illustration of what might have happened if the panzer divisions had been close to the beaches.

2. UTAH

The landing at Utah beach, on the southeast coast of the Cotentin peninsula, was an afterthought by the planners of the massive Overlord invasion. It was felt that having Omaha beach as the westernmost landing would leave the right flank of the invasion open to the German forces in the Cotentin peninsula and Brittany. The nearest viable landing point was 'around the corner' of the base of the Cotentin, past the vast areas of swamp and flooded land between Isigny and Carentan. This meant that the Utah beach landings would essentially be a separate battle until a link-up could occur; days or weeks away. To support the initial three infantry divisions that were to land at Utah, the US 7th Corps were assigned the whole US airborne force available: the veteran 82nd and 101st paratroop divisions.

The 101st began to drop at 1:30 am on the morning of June 6th; the 82nd at 2:30. The drops suffered severely from the inexperience and irresolution of the Allied transport pilots, who tended to give the "go" signal at the first sign of flak. Many drop zones were near areas that the Germans had flooded, so that any scattering resulted in hundreds of unnecessary drownings. But scattered, and isolated though they were, the paratroopers did what was expected of them: they created immense confusion in the defence. They gathered into small groups and headed for objectives, despite often being many miles from their unit drop zones.

The pre-invasion bombardment seemed immense to the defenders of Utah beach. One German company in the area was subject to the attentions of 360 bombers and numerous warships, which destroyed their artillery and anti-tank guns before a single GI waded ashore. There remained only one 88 anti-tank gun, an old dug-in Renault tank turret and some machine guns and mortars. The 88 jammed after one shot, having been damaged in the bombing. The survivors were shocked to see Sherman tanks coming directly out of the sea at them, firing as they came. The entire company had either surrendered or been killed in the first few minutes.

The American troops had accidentally been landed 2 km south of their intended area, due to an uncharted current off the beach. This put them squarely in the least-defended sector of the entire Normandy front. They quickly mopped up the disorganized remnants of the defenders and moved through the beach exits,

captured by the 101st. The US 4th division at Utah had come close to the ideal amphibious landing. They landed 23,000 men with only 197 casualties - less than their last exercise back in England.

Early in the campaign it was obvious that some divisions were more equal than others to the tasks allotted them, despite the theoretical uniformity of units in the US army. The experienced 4th and 9th divisions were able to conduct themselves with a degree of authority on the battlefield, and the 82nd Airborne was as good as any division on either side. The 79th and the 90th, however, continually ran into trouble. Green at the outset, their losses ensured that they were never able to gather a core of veterans to provide the necessary on-the-job training for the greenhorns. Probably the single biggest handicap to the Americans was the low quality of their junior leadership, a problem recognized by the highest echelons of the US army. Too often, as small units found themselves operating for extended periods outside direct control, a lack of drive and aggression was evident. The elite paratroopers, despite their lighter armament, consistently made better progress than the infantry.

The quality of the German defence, while high on average, was also very uneven. Some (especially the conscripts from Poland and Russia) were eager to surrender; at other times an entire Allied division would be held up by a single company with anti-tank guns. In the peninsula area the Germans had the 709th Static division (the Cherbourg garrison), the 243rd Infantry division and the 91st Airlanding division. All were heavily engaged from the outset except the 709th, which was mostly retained for the defence of Cherbourg. About a week after the landings, the 77th Infantry was brought in from the Brittany area; the only good quality troops made available in this area - every German unit of true worth was facing the British around Caen.

As the Americans started the drive to the west coast, they encountered the famous bocage terrain for the first time. Every field was surrounded by a thick, gnarled hedge, which created a mound of earth around its roots. This, combined with the sunken roads and roadside ditches, made every field a potential fortress, and provided minor roads with overhead cover as perfect communications channels, immune from air observation.

The narrow roads made tank crews nervous, as one disabled vehicle would block the entire road. The German possession of the best hand-held anti-tank weapon of the war, the Panzerfaust, meant that Allied tank operations near the front line were particularly hazardous. It was not until the Germans started running out of men that the Americans were able to break out.

It took the US divisions over a week to drive the 15 km from St Mère Eglise (the first French town liberated; by the 82nd) to St. Sauveur, but only 3 days for the 20 km from there to Barneville on the west coast. The Germans fought with skill and dogged determination in the defensive terrain in the east, but they ran short of men and ammunition all too soon. Once the US units had fought their way out of

the morass of bocage, swamps and rivers and had broken into the open country to the west, there was no stopping them. General J. Lawton Collins (commander of the 7th Corps), who had already proved himself as one of the best commanders in the US army, swung his men through 90° less than a day after reaching the coast, and drove straight for Cherbourg.

The Germans had proved themselves masters of defensive combat, but they were too few to overcome the numerical superiority of the US air, sea and land forces.

Scenario Notes

The scenario begins on turn 4, the night turn of the 5th of June, when the first paratroops land. This scenario is the longest in the package. At 52 turns it takes nearly an hour for the computer to get through the game playing both sides. The scenario ends on June 18th, about the time that the US forces historically turned north.

Player's Notes

AS THE ALLIES, you must match your men to the job. The temptation will be to use the paras for everything, but this will lead to your cutting edge being blunted quickly. You must rotate your regiments to the rear as they become fatigued.

Your primary aim is to get to the west coast objectives as soon as possible - that is where the victory points are. It is easy to get distracted by the numerous Germans on the northern part of the map: you must try to screen them and push on to the coast. It is best to use a whole division for this, if possible. You have massive numbers of OBS points to blast the stubborn defenders out of the bocage and swamp in the east - you will need them.

AS THE GERMANS, you must prevent the Americans from reaching the coastal objectives for as long as possible. Since there is little defensive terrain in the west, you must hold them in the east and centre. Your men are fewer but generally better than the Americans; this means you can hold the line with a covering force, and keep strong reserves in the rear to plug the inevitable holes (and there *will* be holes, given the massive US OBS support), and to launch the occasional counter-attack.

The 77th division is your best unit. Keep it in mass as a blocking or counter-attacking force; do not fritter away its regiments as "fire brigades".

You may lose control of an HQ or two at the beginning of the game due to the paratroops; there is nothing you can do about this (historically, the local commander died of a heart attack in the first few hours of the invasion). Your men are good enough to go without a commander for much of the game.

Do not be disappointed if you lose most of your men over the course of the game; this is normal (and historical). You will probably win if you stop the US getting to the west coast by the end of the game, no matter how many men you lose.

Scenario Variants

1. Assume that the Germans had defended the beach adequately. Alter the 919/709 regiment of the 91st division to arrive on turn 4, and place its units within 2 hexes of any beach hex.
2. Assume that the 77th division was not delayed by Allied air power or had started closer. Alter all appearance times to turn 8, except those already arriving on turn 4.
3. Assume the Allied transport pilots had stuck to their tasks and delivered the paras on target. Increase the admin and fatigue of the 3 para regiments to 5, where they are less than this.

3. SWORD

The landings at Sword beach formed the eastern flank of the D-Day invasion, and thus Sword was the closest of the landing beaches to Germany. It was vital that a strong, solid front be formed rapidly, to forestall any attempt to roll up the beachhead from the flank.

The 6th Airborne division was ordered to secure this flank by destroying bridges across the Dives river, and some gun emplacements in the area. They were the first Allied troops to land on French soil, starting at about 1am on June 6th. The landings were just as chaotic as those in the American sector, with many men being dropped into flooded areas, or long distances from their drop zones. The plan called for 720 men to attack the Merville battery at 2am. By 4am only 120 men had found the rendezvous point, but they took the battery, suffering 50% losses in the process.

The Sword beach landing proceeded with remarkable facility. Despite putting up a determined fight, and having a number of heavily fortified resistance nests, the defenders were able to do no more than break the momentum of the Allies' advance.

The British 3rd division, first onto Sword beach, experienced surprisingly few casualties, given the resoluteness of the opposition. This was due to the decision of the British Navy to drive the landing craft right onto the beach to ensure the tanks safe arrival, and to the use of many types of specialized armoured vehicles. There were flail tanks to clear mines, armoured bulldozers to

breach the sea wall, AVREs to destroy obstacles and pillboxes, and flame-throwing tanks to winkle out stubborn defenders.

The German 716th division, defending Sword beach, was a typical undermanned coastal unit. Low on ammunition from the very first, these men fought under heavy naval bombardment, with no air or rear support whatever. However, British officers were surprised to see German infantry, their position threatened by tanks, merely withdraw to another defensive line instead of surrendering.

The only chance the Germans had to stop the invasion in this sector was the 21st Panzer division, stationed in and behind Caen. Considered unsuitable for the Eastern front, most of its vehicles were converted French and Czech models, and (like most divisions in France) many of its personnel were invalided from the Russian front.

The two panzer regiments of the 21st division were ready to move by 2am, an excellent effort by a second class unit. But they received no movement orders until 8am, when the invasion was in full swing. The wasted hours could never be regained. When they were finally under way, their movement was impeded by the necessity to stop and hide underneath their own tanks every time Allied planes flew overhead - as they did frequently. Yet they managed to get to their start positions virtually intact.

Just as the attack was about to go in on the British paratroops east of the Orne, General Marcks (commanding 84th Korps) ordered that all except one company were to switch to attacking the sea landings west of the Orne. It was 4.30pm before the first major counter-attack against the British presence in France could jump off - 16 hours after the first para hit the ground.

The main British D-Day objective was the city of Caen, considered by both sides to be the key to Normandy. Yet they were terribly slow to get an organized advance going towards this vital place. After the first half-hour of the landings, successive waves were getting hopelessly snarled in each other, creating huge traffic jams. Too many non-essential support vehicles had been landed early, and were clogging up roads that the armour desperately needed to advance on Caen. The infantry had to do the job on its own.

Several of the German strongpoints behind the beaches had been by-passed in the effort to get inland, and these were able to enfilade several of the infantry units as they plodded south. Much time was expended by the lead units in reducing these mini-fortresses; time which might, had all else gone well, have gained them Caen.

However, even had the British infantry taken Caen on the first day, with the few tanks able to accompany them, they would surely have been crushed by 21st Panzer the next day. The forces allotted to the task of gaining Caen were completely inadequate to hold it if they succeeded. It would have required the whole armoured brigade and an infantry brigade to have entered Caen by mid-afternoon to have held the town; almost certainly an impossible task.

The attack of the 21st Panzer against the seaborne forces was tentative from the start. The tanks raced down the corridor between Sword and Juno beaches to the sea, and immediately encountered Sherman Fireflies of the Staffordshire Yeomanry, the only tanks ashore that could challenge the German tanks. The Fireflies arrived just before the panzers, and had the high ground. The German units lost over a quarter of their tank strength in a few minutes, and withdrew. Minutes later, by coincidence, the next gliderloads of the 6th Airborne started landing behind the 21st Panzer. This was too much for them: they retreated to Caen and dug in. The only counter-attack by the German army against the British beachhead had been decisively defeated - partially by the German high command.

Scenario Notes

This is one of the shorter scenarios, with 20 turns and 2 divisions on each side. It takes about 15 minutes to play through the scenario with the computer playing both sides.

The game starts on turn 4 of June 5th, and ends on June 9th.

Player's Notes

AS THE ALLIES, you have the initiative and a lot of OBS points. Almost all your objectives are beside the river that runs down the board to Caen. Your paras land on one side of this river, and your seaborne infantry on the other. You have little chance of getting into Caen, but trying will get you many points. You should also concentrate on the enemy armour units, as you get far more points for them than for infantry.

AS THE GERMANS, you have a simple task - to deny the Allies Caen - everything else is secondary. Fortunately you have terrain and forts to help you, so it is not too difficult.

Try to preserve your armour for a concentrated, decisive strike rather than let it be committed piecemeal. It is your only way of getting objectives back by the end of the game.

Scenario Variants

1. Assume that the 21st Panzer had been sufficiently organized to get under way immediately. Alter all its appearance times to turn 4.
2. Assume that the Airborne drop had not been as disorganized as it was. Increase the fatigue and admin levels of all 6th Airborne units to 5 where they are less than this.

3. The advance of the British 3rd Division was hampered by poor beach organization as much as German defenders. Assume that they were better organized and advance the HQ arrival turn to 5.

4. CHERBOURG

Cherbourg was one of the prime targets for the Allied armies after D-Day. It was the only major port in the area of the landings, and it was anticipated that it would greatly ease the strain on the artificial harbours (Mulberries) through which the Allied supplies and reinforcements flowed. All southward progress on the American front was stopped to facilitate the drive north.

To take the fortress port, the US had the veteran 4th and 9th Infantry divisions and the green 79th Infantry division. The US divisions were at full strength, as their losses early in the campaign had been replaced. To their dismay, the commanders found that only one third of the replacements were rifle trained. The 4th and 9th were considered two of the best infantry units in the American Army. The 79th, however, gained a reputation as one of the less successful units, and it went through a number of commanders during the campaign.

To oppose them the Germans had remnants of the 77th, 91st Airlanding, 243rd and 709th Static divisions. Of these, only the 77th was of reliable quality. The others were second rate units, used for garrison and rear echelon duties. Many of their personnel were admin and support staff, or wounded veterans considered unfit to fight on the eastern front. None were up to even half strength.

There was only isolated fighting as the Germans swiftly withdrew into the prepared positions around Cherbourg. Much to American surprise and delight, the Germans abandoned the outer ring of fortifications on the high ground around the city and retired immediately to the inner forts. The Germans considered that they did not have the quantity or quality of manpower necessary to defend the outer forts adequately. Most of the best men had already been killed or captured; about half the 77th division's remaining personnel, led by their commander, had broken southwards out of the peninsula against Hitler's orders. The commander was saved the disgrace of a court-martial by an Allied fighter-bomber. The remains of the four German divisions were organized into battlegroups to defend the crumbling city.

The defences of Cherbourg were designed to repel a sea-borne invasion. In an exercise in early May, General Marcks had demonstrated the port's vulnerability to a land attack by breaking through the defences at the same points that the Americans were to attack.

On the 22nd of June, a week after the turn north, the Americans launched their offensive on Cherbourg. This was their first experience of street fighting, and the

Germans proved masters of this style of combat. It took 6 days of constant combat, hundreds of small-unit actions, to grind into the centre of the city. Even after the commander, von Schlieben, surrendered on 26th (after tanks started firing directly into his bunker), many individual units held out for another day. The US 9th division found it necessary to fight for several more days to reduce Cap de la Hague at the northwest of the peninsula, where stragglers from Cherbourg had set up yet another defensive line.

However, the Americans were not able to reap the rewards of their efforts for some time to come. They had made the port of Naples operational after only 3 days; Cherbourg was to take 3 months, by which time most of the large ports of France and Belgium were in Allied hands.

The Germans had embarked on a program of demolition unexcelled in the history of warfare. There were hardly two bricks left joined together in the entire port area; sunken ships littered the harbour. This, combined with the fact that Cherbourg had been taken 33 days later than originally planned, meant that the Allies had failed in their strategic objective - to have an operational major port to aid their drive on Paris, Belgium and Germany.

Scenario Notes

This scenario is 43 turns long, and it takes about 40 minutes for the computer to get through the game playing both sides. The scenario starts on June 19th, when the Allies turned north, and ends a day after the port area was captured.

The Germans units have many division- and corp-asset troops integrated into the regimental structures. This approximates a proper divisional structure, so as not to handicap the Germans unreasonably.

Player's Notes

AS THE ALLIES, your primary aim is to get to the port objectives as soon as possible. You must not be distracted by any Germans that get by-passed; push on to Cherbourg without delay. Send individual regiments to take care of the lesser objectives. You have massive numbers of OBS points to blast the stubborn defenders out of the forts and defences - you will need them.

You have plenty of room behind your front to rest whole regiments - take good advantage of this. You should have no trouble keeping your HQs out of enemy reach.

AS THE GERMANS, you must prevent the Allies from reaching the port objectives. Try to hold the outer line of forts for as long as possible, using your weaker units. Attempt to keep an entire division for the close-in defence of the city of Cherbourg. You have two options regarding your units that start the game in the

front line: they can fight it out to the death, or try to escape to the haven of the fort line. The former option will delay the US, but ensure the death of your units. The latter option may rescue some units, but the others will be sacrificed for no reward in time or enemy casualties.

You will lose most or all of your men over the course of the game; this is normal (and historical). You will probably win if you stop the US getting to some of the port hexes by the end of the game, no matter how many men you lose.

Scenario Variants

1. Assume that the Germans had fortified the approaches to the city properly. Fill in all the gaps in the defensive rings around Cherbourg with fortified defence terrain. Add as many 1 strength point static infantry units as can be fitted into the German order of battle, and place them in any fort hex.

2. Assume that the US replacements were of adequate quality. Increase all experience 2 US battalions to experience 3. Make the minimum regimental leadership and admin values for US units 3.

5. CARENTAN

The elite 101st Airborne division started dropping at 1:30 am on June 6th in widely scattered groups between St Mère Eglise and Carentan. Their initial task was to capture the exits from Utah beach to help the 4th division get inland as soon as possible.

The drop was a bad one, as the Allied transport pilots showed a lack of resolve. It seemed the mere presence of flak would make them trigger the green jump light. In several recorded instances, pilots pressed on to the drop point only with a gun at their back. Many men were dropped great distances from their assigned areas; instead of the large and cohesive units planned, the paras gathered and fought in small groups, often with men from different units.

The opposition to the landings was also confused. The Germans fought the paratroops where they found them: hanging from trees, hiding in ditches, roaming through villages, or still dropping from the sky. But finding them was the difficulty. There was no front line, and reports of drops were flooding in from dozens of locations. The commander of the 91st Airlanding division, Lieutenant-General Wilhelm Falley, was killed by a roving band of paras soon after dawn.

Much of the landing area was naturally swampy, and Rommel's defensive plan included the flooding of huge areas to impede movement. Most of the paratroopers found themselves slogging through wet marshes in the beginning; not a few were drowned quite some distance from the sea.

When the men of the 4th division fought their way off Utah, they found that the 101st had done its job and captured the exits from the beach.

After the 101st had fulfilled its original brief to facilitate the Utah beach invasion, they expected to be sent back to England to refit for more landings. Indeed, as expensive, highly trained specialists, they would be wasted if called upon to perform the role of ordinary ground infantry.

Instead, they were again and again required to make up for the Allied lack of trained, competently led infantry. It was discovered early in the Normandy campaign that the only way to make adequate progress in the excellent defensive terrain of the area was to use small-unit infantry tactics to prise the defenders out of each strongpoint. This required a large supply of quality, well-trained men to make up the inevitable heavy losses sustained in this form of warfare.

After a couple of days the situation clarified, with the 101st holding a front reaching inland from the coast, facing south. It took 5 days of hard fighting to reach and take Carentan. The paras had to fight their way across two major rivers and huge expanses of swampland. Just one day after securing the town, a determined counter attack from elements of the 17th SS Panzergrenadier division and the 6th Parachute regiment came within an ace of wresting it back.

The situation was saved by the arrival of a combat command of the 2nd Armoured division, sent from the Omaha beachhead. This was no co-incidence: the orders for the counter-attack had been intercepted by Allied intelligence, using the Ultra device. Thus General Bradley was able to have reinforcements available to meet the attack before it started. The town was held and the link with Omaha secured.

Scenario Notes

This scenario has 40 turns and less than 2 divisions on each side. It takes about 15 minutes to play through the scenario with the computer playing both sides.

The scenario starts on turn 4 of June 5th, when the paras first landed. It finishes June 15th, when the German counter-attack had been decisively defeated.

The bridges across the rivers form natural axes of advance in this scenario; this means that the Americans' route is substantially pre-determined. This slows them down as much as the Germans do.

Player's Notes

AS THE ALLIES, you have good men. Your primary aim is to get to Carentan as soon as you can. Every unit should attack every turn, if possible, using your massive air support to kill German units one by one. If you are well established across the rivers near the end of the game, the German counter-attack shouldn't worry you too much. If, on the other hand, you haven't yet got Carentan ...

AS THE GERMANS, you have to contain the paras as long as possible. You must carefully feed your men into the front line as they are destroyed, keeping a regiment in reserve (if possible) to deal with any breakthroughs.

Do not be disappointed if you lose most of your men over the course of the game; this is normal (and historical). You will probably win if you stop the US getting Carentan by the end of the game, no matter how many men you lose.

Scenario Variants

1. Assume Ultra had not provided warning of the German counter-attack. Remove the 2nd Armoured division from the Allied OB entirely.
2. Assume that Allied airdrops had been better executed. Increase the fatigue and admin of the 501 and 506 regiments to 5 where they are less than this.
3. The 17th SS Pz Grenadier division was stationed in the south of France on D-Day. Assume it was closer and alter all arrival times to turn 28.

6. VILLERS-BOCAGE

The Battle of Villers-Bocage was General Sir Bernard Law Montgomery's first major attempt to outflank Caen. He decided to use two divisions from his days of desert glory, the 51st Highlanders and the 7th Armoured, to make some progress where the less experienced divisions failed. The plan was to attack with one division on each side of Caen simultaneously, and drop the 1st Airborne division behind Caen when sufficient progress had been made. The 51st's failed attack east of the Orne does not concern us here.

The 7th Armoured had changed from Shermans to Cromwells and Honeys while in England, and was now superbly equipped to fight the Italian army in the desert. Unfortunately, it was in Normandy. The division had also lost some of its old spirit, feeling that it had already done more than its share of the fighting.

The initial attack, with the 50th Infantry division, was from Bayeaux towards Tilly-sur-Seulles, but it ran into the elite Panzer Lehr division on the second day and stopped dead. Dempsey and Bucknall, the army and corps commanders respectively, thought to detect a weakness on the enemy's left flank. On the 12th June, they sent the 7th Armoured west to attack this gap in a south-easterly direction, hoping to surround Panzer Lehr and force it to withdraw or surrender.

This move met with success, and they entered Villers-Bocage early on the 13th. One tank and one mechanized infantry squadron continued to Point 213.

Viewing this with interest from a nearby wood was Captain Michael Wittman, a panzer ace from the Russian front with 119 victories to his credit. He and his Tiger

were to stop the entire 7th Armoured attack and turn it into desperate retreat. The first shot from his 88mm gun destroyed the leading vehicle, a half-track, thus blocking the road. The Tiger then charged out from its cover and drove down the road beside the column, wrecking a vehicle with every shot. In 5 minutes, Wittman accounted for 25 armoured vehicles. Every shot the British fired either missed or did negligible damage.

After refueling and rearming his mount, Wittman took his unit of 5 Tigers and some infantry and attacked the remainder of the forces on Point 213. Later that day, he returned to Villers-Bocage with reinforcements and again attacked. The British were ready this time, and destroyed 4 Tigers with anti-tank guns; the crews, including Wittman, escaped because there was no British infantry left to support the gun crews.

By 5pm the surviving British forces withdrew west to Tracy-Bocage. They had lost 25 tanks and 28 other armoured vehicles in a single day, a devastating blow. Surely the most outstanding single-handed feat of modern warfare.

Meanwhile, the rest of Panzer Lehr division were resisting the assault of the 50th division from Tilly-sur-Seulles, and had completely halted the British advance. This battle saw the first widespread use of the remarkable Panzerfaust, the first infantry-portable weapon capable of hitting and destroying a tank at reasonable range.

Again, the British tanks raced forward through the German lines, exhilarated by the apparent lack of opposition, leaving their infantry to be slaughtered by the dug-in Germans. The tanks were then forced to withdraw by lack of supporting infantry, or met a screen of anti-tank guns and were themselves devastated.

Once again the Germans had proved themselves masters of tactical combat. While it was not enough to save them, it meant that they were able to hold off the might of the Allied armies for two months against terrible odds.

Scenario Notes

This is one of the shorter scenarios, with 19 turns and less than 2 divisions on each side. It takes about 10 minutes to play through the scenario with the computer playing both sides.

The game begins on June 11th, with the original attacks by the 50th division, and ends on June 15th, with the defeat of the attacks.

This is one of the trickier situations to simulate with the **Battlefront** system. The initial advance of the 7th Armoured proved too difficult, as the units would always be attracted from the axis of advance towards the enemy. Therefore the 7th Armoured appears at the high-point of its advance on turns 9 and 10.

This is quite a useful technique for deploying reinforcements, especially if they have a long way to travel from their initial point of arrival.

Player's Notes

AS THE ALLIES, you have the initiative and a lot of OBS points. Your copious supply of manpower makes up to some degree for the lesser quality of your units. If you do not try to be too ambitious, and rest your units, you can probably hold on in the south, and make a slow grinding advance in the north.

AS THE GERMANS, you have one of the best units possible in the game, the Panzer Lehr division. It should be able to taken on any Allied unit and win, OBS points willing. Do not make too many attacks, though, as the bocage is excellent defensive terrain, and you will do as well in defense and with minor combat. The Allies have to make the running. Destruction of 7th Armoured should give you enough points for victory.

Scenario Variants

1. Assume the 7th Armoured had been properly equipped with Shermans. Alter the rating to 10 and the equipment to 4 on all its armoured units.
2. Try starting the 7th Armoured at its jump-off line on turn 1. This should see it become embroiled in the front line fighting with the Panzer Lehr. Move the start positions of all the 7th Arm's units to anywhere in the top 4 hexes of the map.
3. Assume Wittman was not present. Omit the fourth battalion (101) of the third regiment (div.trps) of the Panzer Lehr division.
4. Assume that the British had worked out some of the principles of combined arms warfare. Hand out the two divisional asset infantry battalions of the 50th XX to deserving regiments and replace them with copies of the 1st battalion of Shermans. This would represent the co-operation necessary between infantry and armour.

7. GOODWOOD

Goodwood was Montgomery's third major attempt to outflank Caen (the Villers-Bocage scenario simulates the first, Epsom the second). He was undergoing extreme political pressure to achieve results more concrete than "writing down the German armour", as he put it.

The shortage of British manpower was beginning to tell, and casualties were exceeding replacements by 2:1. Any further major losses could only be made good by dismantling extant divisions, clearly an undesirable course of action.

It was therefore decided to make an armoured attack using all three armoured divisions available to the British in Normandy: 7th, 11th and Guards Armoured.

They would be moved east of Caen, and attack south then southwest to take the high ground behind it, which commanded the road to Falaise and Paris; all good open tank country. Unfortunately, it would be better for the Germans, with their longer-ranged guns, than the Allies.

The eastern flank would be secured by the 3rd Infantry division; Caen itself would be taken by the 51st and Canadian 3rd Infantry divisions. The Canadian 2nd were to attack west of Caen.

A number of faulty assumptions were made about the attack: that three armoured divisions (600 tanks) could be concentrated in secrecy; that the front was held by a weak Luftwaffe Infantry division; that massive airpower would nullify the defenders indefinitely; that unsupported masses of tanks would "saturate" the defenses that remained.

Not only did the Germans know the attack was forthcoming, but the British knew that the Germans knew, via Ultra. This was thought not to matter, as the defenders would all be killed by the massive airstrike beforehand; it was just to be a case of driving until the objectives were reached.

The Luftwaffe division, or what remained of it, was indeed in front of the assault. So were three panzer divisions, unknown to Allied Intelligence. Every village in the area had been turned into a 'hedgehog' by the Germans; self-contained, with mutually supporting fields of fire. These villages were to be by-passed in the plan.

As had been discovered on numerous previous occasions, even the most intense bombardment would not stifle the defence for long. The survivors would gather themselves together after a short period (from a few minutes to an hour) and fight as before.

One lesson had not been learnt from Villers-Bocage, Epsom, or indeed from the battles of the Western Desert; the vital necessity of close co-operation between armour and infantry. The armour would shelter the infantry up to short range, and provide mobile artillery support. The infantry would take care of other infantry and anti-tank guns. Either without the other would suffer on the Normandy battlefield.

Yet the plan specifically separated, not only the infantry divisions from the armoured, but the motorized infantry from the armoured spearhead of the same division. Exactly how any number of tanks, 1, 10, or 100, were expected to deal with even one emplaced 88, was left unsaid. The Germans had very sensibly provided themselves with a screen of these 88 emplacements across and along the line of advance of the British armour.

The aircrews providing the preparatory bombardment were to wonder why there was so little flak to contest the skies with them; it was used to contest the battlefield with the frail Allied tanks.

Even before the attack started, things started to go wrong. It was discovered that a British infantry division had laid an unmapped minefield across the start line. It was decided to clear only three narrow lanes through it, in the interests of

preserving the (already compromised) security. Thus three armoured divisions, one at a time, were to funnel through three one-tank-wide gaps.

The air bombardment was of unprecedented ferocity. 2,000 bombers dropped over 8,000 tons of bombs on front line units and rear area villages. The initial effect was tremendous: Tigers were hurled bodily into the air, whole units were destroyed. Men were driven mad in their tanks by the incessant thunder. 750 artillery pieces fired 250,000 rounds. There were 2,000 fighters and fighter-bombers ready in support: unfortunately the only RAF Forward Controller with the 11th Armoured was killed in the first two hours of the attack.

Even in the first hours of the advance, with no enemy opposition, the schedule broke down. The lead armour units were slowed by the enormous dust clouds thrown up by the bombardment, and the necessity to dodge innumerable bomb craters. The subsequent waves of tanks had to squeeze through the minefield first, then follow the leaders. The flanking infantry attacks bogged down almost instantly, amazed by the quality of opposition the supposedly dead Germans were able to offer.

The armour very quickly found the flaw in the plan to by-pass the villages: it meant that the strongpoints were able to enfilade the tanks without fear. If the frontal armour of a Sherman was inadequate to withstand an 88mm round, the side was worse. The Cromwells of the 7th Armoured had no chance.

As the depleted divisions approached the village of Cagny, they were to separate. 11th Armoured would continue southwest to take Bourgebus and the high ground; Guards Armoured would swing southeast to Vimont. 7th Armoured would stay between them, ready to help either if needed.

Cagny was the vital hub of the plan. It was not thought necessary to take it, as it had received 650 tons of bombs in ten minutes in the morning; nothing could be alive! The infantry required to take it had all been dropped off early in the advance. To their dismay, the tanks found that Cagny was alive and well, and bristling with 88s. The armour suffered terribly; dozens of tanks were burning within minutes.

Many of the German tanks caught in the bombing were not destroyed, but had been covered in earth, or had their engines filled with dirt. By the time the Allied armour approached Cagny, many of these had been rendered serviceable, especially the Tigers. Stationed along the left (southern) flank of the advance, they were able to cause enormous destruction.

The village of Cagny did not fall until some infantry arrived in the late afternoon. It had been held against an entire armoured division, for most of a day, by one Mk IV tank and a battery of 88mms. The tanks pressed on to their objectives.

The main force roared towards the high ground. Weakened, but still dauntingly strong, they passed between the villages of Bras and Hubert Folie. These were both German strongpoints; again the 88s spoke, again the Shermans burned. The 11th Armoured had lost over half its tanks in one day.

Overnight some replacements arrived, and the renewed armoured units made the charge onto the high ground again. The Germans had also reinforced, and the battle was a repeat of the previous day. By the afternoon of the second day, some infantry with artillery support had arrived, and the village of Bras was taken by 7pm. The 3rd Royal Tank Regiment had started the day with 63 tanks; they had 9 left. The impetus of the armoured rush had been spent.

By the 20th of July, the third day, the operation had substantially ground to a halt. The salient was cordoned off by the 1st SS, 12th SS, 21st Panzer and 272nd Infantry divisions, with 116th Panzer arriving the next day.

The armour had become stalled on the lower slopes of the objective heights. The 2nd Canadian division arrived to replace the 7th Armoured, the infantry being relatively fresh, and more suited to the terrain. Their attack did not start until early afternoon of the 21st, by which time the Germans had reinforced as well. The Canadians spent their blood, but accomplished little. The operation was over.

What did it accomplish? The British lost over 400 tanks, more than 1/3 of their strength in France, and nearly 6,000 men. The tanks were replaced within 2 days; the men could never be. They had taken Caen, at last, but the strategic objective, the heights behind the town, remained firmly in German hands. Not until the Americans finally put in a successful attack, Operation Cobra, were the heights to be wrested from them.

Scenario Notes

This is one of the larger scenarios, with 19 turns and a full 3 divisions on each side. It takes about 35 minutes to play through the scenario with the computer playing both sides.

The game begins on July 18th, the date of the initial attacks, and continues until July 22nd, when the operation petered out.

As in Villers-Bocage, we are confronted with the problem of slipping Allied armoured units through a small gap, which the game system makes difficult. We therefore start the units in the positions they occupied after the initial advance.

Player's Notes

AS THE ALLIES, you have an enormous number of units to push through very small gaps. There is no easy way to do this; you must make room for them by attacking and destroying the German units that block your way.

All your advances will occur in the first two days; after that, you will be slowly pushed backwards. You must make careful use of your OBS points in defense; they can save you from disaster. Obviously you should concentrate on holding objectives as long as possible.

Make continuous attacks on both flanks with your infantry units: you should clear Caen and the forest as soon as possible. When the German counter-attack comes, you should have enough room in the rear to rotate your regiments as necessary.

AS THE GERMANS, you are initially under some pressure. You start with several units cut off by the stream of Allied armour: they will probably die.

You have an abundance of excellent units after the first two days. You should have no difficulty in reversing the tide and driving the British back: how far is the question. Choose your axis of advance carefully; examine where your victory points come from.

Scenario Variants

1. Give the Germans full use of the 116th Panzer division, which they did not need to commit historically. They are the 60th and 156th regiments and the first three divisional assets of the third division. Raise their strengths from 0 to 8, except for artillery, which should be 3. The three assets should have strengths of 9, 4, and 6 respectively.
2. Assume the British got their tactical air support working properly. Give them 40 OBS with a reliability of 3.
3. Assume the German 272nd division had been tied up by the Americans. Reduce the strengths of the 980th, the 981+982nd regiments and the fourth divisional asset of the third division to 0.
4. Assume the Germans had not had adequate forewarning of Goodwood. Remove all German forts, and replace all 'defenses' terrain hexes with clear.

8. EPSOM

Epsom was Montgomery's second major attempt to outflank Caen (the Villers-Bocage scenario simulates the first). This time he used three new divisions, the theory being that the desert veterans used in Villers-Bocage were "stale".

The 15th Scottish, 43rd Welsh and 49th West Riding (Yorkshire) divisions were to be accompanied by the 11th Armoured division. The plan was for the 49th to clear the heights around Rauray, then the 15th to advance through Cheux and Coleville to seize the bridges over the Odon, with the 43rd mopping up behind. The 11th Armoured was to advance 'with' these two infantry divisions, and pass through them once the bridges were gained.

The local German commanders were well aware of the blow about to fall on their thinly-held front line; their excellent use of tactical intelligence (especially wireless

interception) had told them of the huge force gathering in front of them. The only reserve in the area, one company of Panthers, was put into prepared positions to await the onslaught.

The attack by the 49th began with the usual pre-dawn rolling barrage of artillery, following which the infantry started their assault. The Germans had long ago formulated the simple answer to this, which was to man the front line defences very thinly, then move their men into position in the delay between the artillery barrage and the infantry attack.

The 49th's attack was further hampered by a sudden fog that appeared as the infantry were advancing. Incurring terrible casualties, they got only half way to Rauray. The heights were still held by the 12th SS division, who could sweep the flanks of the attack due to occur the next day. Fortunately for the British, the attack had worried the Germans enough to commit their last reserves in the immediate area.

The assault of the 15th Infantry followed the same pattern - barrage, advance, fierce resistance. The British infantry officers seemed to know no way to attack other than the classic frontal, with two companies forward and one back. Some units were able to break through the scattered German defence and make their way south towards their objectives. The Germans correctly divined the nature of the threat, and used the armour that had helped contain the 49th's assault to make a flank attack on the 15th and 11th Armoured.

The manoeuvring to meet this threat, together with the fact that the plan called for the bulk of three divisions to funnel through the main street of Cheux, caused immense difficulties with the advance. The armour and motorized infantry were especially entangled, and were delayed by up to 24 hours. The British had no armoured half-tracks to take the infantry across country, so the troop-filled lorries were road-bound.

The inexperience of the attackers and the paucity in manpower of the defenders meant that the battle was a patchwork affair, with the assault being held up by small parties of Germans, often from mixed units. Many infantry were pinned down by small units of Germans with well-sited machine guns and mortars in the orchards and wheat fields of the area. This was the first experience in the British sector of the WW I style static warfare that the Allies were to engage in for the next few weeks.

By the morning of the 28th of June, the third day of the main assault, the lead infantry had finally got to the Odon river and captured the bridges there. At last the armour could win free, and it raced the short distance to Hill 112, their immediate objective. Waiting for them was a small motorized Luftwaffe Flak unit, equipped with 20mm and 88mm guns. On this hill they commanded Esquay, the small village through which the Allied armour had to approach the hill.

First the Luftwaffe unit beat off an aerial attack, then they destroyed several Shermans that left the cover of the village to approach the hill. One brave

panzergrenadier killed four tanks with Panzerfausts, then captured another one using only his pistol! Finally a co-ordinated attack went in, twin-engine Lightnings overhead and dozens of Shermans below. The Germans demolished some of their guns and withdrew, destroying all the lead tanks as they went.

The two British units that took part of the hill held it for just over a day. They were forced to retreat by an enormous threat behind them: the Germans had put in a corps-strength armoured counter-attack, using elements of every armoured division available to them. Lehr, 1st SS, 2nd SS, 9th SS, 10th SS, 12th SS and 21st Panzer all contributed to this massive thrust.

The British were prepared, however, because they had captured an officer of the 9th SS carrying plans of the whole attack. Soon the Germans were to learn exactly how difficult it was to press forward an attack in the bocage - with the added disadvantage of a complete lack of air power or reconnaissance.

These veterans of the Russian front found that the British, who were so clumsy in attack, were superb in defense. A staff officer of the 9th SS said "The firing power of a British division cannot be compared with that of a Russian division, because the British support by aircraft and artillery was far superior to anything the Soviets could offer us. The heavy battleship guns were devastating". A 16" naval shell had only to land near a Panther to send it spinning over from sheer force of blast.

The Germans' total lack of air power cost them dearly, and they could not even obtain targets for their initial bombardments. It is clear that they should have put in a night attack. As it was, the assaulting forces were devastated from the air. A huge bombing raid on Villers-Bocage, designed by Montgomery to destroy the town so as to impede the advancing armour, caught the panzer battalion of the 9th SS Panzer division and decimated it. So the counter-attack ground to a halt.

Epsom had been a failure when considered as an attempt to cut off Caen. But as an operation to destroy the armoured strength of the German army in Normandy, it had been very successful - at a huge cost.

Scenario Notes

This is one of the larger scenarios, with 31 turns and a full 3 divisions on each side. It takes about 35 minutes to play through the scenario with the computer playing both sides.

The game begins on June 26th, the date of the initial attacks, and continues until July 4th, when both sides' operations had petered out.

Player's Notes

AS THE ALLIES, your task is a difficult one. You have to destroy the German front line units as quickly as possible, and try to make a gap through which your mass of

excess units can go. You should devote all of your OBS point to this task. Your goal is to take the bridges over the river Odon, and Hill 112 beyond, if you can manage it. You have little chance of holding that area till the end of the game, but the Germans should only be able to push you back slowly.

AS THE GERMANS, you have to stop the Allies from getting across the river Odon. If you can stop their initial drive there, you should be able to capture the objectives north of it before the end of the game.

Try to preserve your armour for a concentrated, decisive strike rather than let it be committed piecemeal.

Scenario Variants

1. Assume the II SS Panzer Korps had been retained on the eastern front (where it may have prevented the destruction of Army Group Centre). Remove the 9th SS and 10th SS Panzer from the game by deleting the first two regiments of each of the first two divisions.

2. Change the initial weather to clear by altering the weather factor from 0 to 3. This means that the British attack will begin with full OBS support.

3. Assume the Germans had not had forewarning of Epsom. Replace all 'defenses' terrain hexes with clear.

GENERAL SCENARIO NOTES

Units

The Allies generally employed a standard type of unit for each purpose; thus most of their infantry battalions will be the same as each other, within the same nationality. The only differences are in the experience level and the fighting spirit, reflected in the rating of the unit.

German units varied. Almost every unit was unique; strength, experience, equipment and rating changing within the one regiment. This makes them more interesting, but the research necessary to get them correct was extensive.

The static infantry with 0 movement in the German OBs represent the fixed gun emplacements that were supposed to disrupt the Allied shipping. This function is obviously outside the game, but they were able to act as points of resistance and hold up the Allied advance quite significantly.

The strength allocated to them represents the ad hoc collection of stray men, cooks and file clerks that often gathered around an NCO or junior officer for an impromptu defence.

Terrain

The single most prevalent type is bocage, that mass of interwoven branch, earth and root that rendered attack hazardous against any quality of opposition.

Hilltops were one of the most significant terrain types, as they were often the only chance a unit had to see further than the next hedge.

The terrain type "defences" represents the kind of fieldworks that the Germans were often able to erect at short notice, but which do not deserve a "fort" rating. It is also used to augment the defence value of a fort where appropriate.

Rubble is found in towns that had been bombed into ruin, sometimes deliberately to impede the flow of German reinforcements. Caen is an example.

Swamps include natural marshes as well as the vast areas that the Germans had flooded before the invasion to endanger paratroops. These claimed hundreds of lives.

Cliffs are included solely for the Omaha scenario, where they had such a major effect on the landings. There are undoubtedly others in the area covered by the maps, but they will have been treated as hilltops or heavy forest, depending on their tree cover.

Often minor terrain details in the scenarios will vary from those on the main map which show the condition of the Normandy area on June 6th. This will usually be forts or defenses built for one scenario, bridges destroyed during the time span of the game or rubble created by the Allies.

There are areas of the map, notably in the southwest, which are not included in any of the scenarios. There were several American offensives in this area before the final success of *Cobra*; for example the first attempt to capture St Lo. One of the principal reasons for providing such a large map area was to make scenario creation easier.

Play

There is little doubt that the Allies will have the initiative and be able to establish themselves ashore or control some or most of the map by the end of each scenario - that is, gain a historical victory. The aim of the game, of course, is to better the actual performance of your side: the Allies will try to get to the historical objectives more quickly, the Germans will try to slow or stop them, and/or inflict high losses in the process - a player victory. The points gained in each game indicate your progress towards this goal.

You will find that it doesn't need many Germans to slow the Allies down significantly, but the chosen units will usually suffer. Bad weather is the Germans best friend; if it rains or becomes stormy your good men will be on more than even terms with most Allied troops.

GENERAL SCENARIO VARIATIONS

There are a number of possible variations which are generally applicable to each scenario. They are listed below.

Luftwaffe Effort. One of the biggest fears of the Allies was that the Luftwaffe would force a pitched aerial battle over the beach-head. The opposite turned out to be true but it need not have been so. Give the Germans a reasonable number of air points and adjust Allied air points and reliability.

Intelligent German Dispositions. This covers a multitude of sins. It could range from earlier arrivals of German units to having panzer divisions near the beaches.

Improved Allied Doctrine. The leadership and admin values for Allied units are often quite low. After 4 years of war this did not need to be case. Sensible training and procedures could have increased these values by 1 or 2 for each unit.

Improved Allied Equipment. Again, the Sherman did not have to be as bad as it was, as later models showed. Change the rating of Shermans to 12 and increase the experience of all tank battalions by 1 to account for the greater longevity and confidence of their crews. You could also do the British a favour by equipping all their Cromwell units with Shermans.

We intended to include a campaign variant for the Utah/Cherbourg scenarios in this space. Alas, there is not enough room in the manual for the necessary organizational displays. However, all is not lost! The campaign variant can be found in Issue 7 of our *Run 5* magazine, details of which can be found on the inside front cover of this manual.

PART THREE

THE DESIGN ROUTINES

1. INTRODUCTION

The following notes are meant as a guide to the design process. The information they contain will provide some insights into how the game works, and should be read at some stage even if you never construct your own scenarios.

Varying an existing scenario is fairly straight-forward and we provide an example of how to do this in Chapter 4. Variations are the easiest way to get the most out of your game. All of the scenarios in the game come with suggested variations which can be easily implemented. However, designing a full scenario will require a reasonable degree of familiarity with the game itself.

All games in the **Battlefront Game System** will use what are essentially the same design routines. Where there are differences between **Battles in Normandy** and **Battlefront**, these will be noted in Chapter 6.

We will be publishing complete scenarios for the **Battlefront Game System** in our magazine *Run 5*. These will contain all the information required to create entire new games using the design kit. For details on our *Run 5* magazine, please see the inside front cover of this manual.

2. USING THE DESIGN MENUS

The data card contains a schematic display of the design menus. They operate in the same way as the Game menus that you have already used.

In **Battles in Normandy** there is no distinction for editing purposes between a scenario and a game in progress. A game can be saved to disk, edited as you see

fit and then restarted. This is a feature to be used with restraint. While you can change sides with the computer, for instance, it will generally take until the end of the next game turn for the computer to readjust.

3. PREPARING A DISK

Whether making a variation to an historical scenario or creating an original scenario, the procedure for preparing a save game disk is essentially the same. Examine the Start and Design menus.

If you have not formatted a *Battles in Normandy* save game disk, prepare one using the procedure given in Chapter 3 of the Game Routines.

When making a change to an historical scenario, select the <CREATE> line from Menu A and type (RET) to obtain Menu B.

If the template which is providing the source for the variation is on a scenario disk, select the <SCENARIO> line and type (RET). Select the chosen scenario from Menu C. The computer will automatically process you through to Menu J (Create Master).

If the template which is providing the source for the variation is on a save game disk, select the <DISK> line and type (RET). Load the chosen file from Menu D. The computer will automatically process you through to Menu J (Create Master).

Use the Design Menus to make whatever changes you wish to the data and then come back to Menu J.

Select the <DISK> line to go to Menu D. Select the <SAVE> line. Locate the desired save location in the catalog with the arrow keys and then type (RET). You will be offered an opportunity to enter a comment. Use it if you wish, otherwise select the <SAVE GAME> line and type (RET).

When you wish to create an original scenario, repeat the above procedure but before entering data use the <CLEAR> line in Menu J to erase the data bases.

4. VARYING A SCENARIO

Varying a scenario is a way of exploring historical options. It is much easier than creating a new scenario from scratch and is a good way to become familiar with the design mechanics.

The American landing at Omaha was the only assault which struck real trouble. How much worse would it have been if Rommel had had his way and a panzer division had been stationed at St Lo?

We will assume that the panzer regiment of the Pz Lehr (represented as two battalion assets) and one of the panzer grenadier regiments arrive near Omaha beach on the noon turn. This example will take you through all the operations needed to vary the Omaha scenario.

Use the instructions from Chapter 3 to set up a copy of the Omaha scenario to work on. Then select <CREATE> from Menu J to obtain Menu 4.

From Menu 4 select the <UNIT DATA> line. From Menu 10 select the <TROOPS> line. From Menu 11 select the Axis <DIV 3> line. The screen is blank at the moment, a situation that we will remedy as we create elements of the Panzer Lehr. Select <DIVISION>. We will enter the details of the divisional HQ and assets.

Select <HQ> and then <EDIT>. The cursor should now be flashing in the box labeled HQ ID at the top left of the screen. Type (PZ LEHR) (RET) (PANZER) (RET) (7) (RET) (7) (RET) (4) (RET) (12) (RET) (2) (RET) (3) (RET) (7) (RET). The cursor will be back in the HQ ID box.

Type (ESC/f1) twice then select <BN 1> then <EDIT>. We will now create the first of the divisional assets. Type (1AB) (RET) (6) (RET) (6) (RET) (11) (RET) (0) (RET) (9) (RET) (14) (RET) (11) (RET) (13) (RET) (1) (RET) (2) (RET) (7) (RET) (6) (RET) (1) (RET). The cursor should be back in the box labeled ID and the screen should look like **fig 7**. If it doesn't, use the arrow keys to cycle through the parameters and make the appropriate changes.

In general, typing errors can be corrected by hitting the space bar if the cursor has not been moved on from the variable or by using the (RET) key to relocate the variable and re-enter it.

Type (ESC/f1) twice and select <BN 2>. Create the second battalion in the same fashion as the first except that the ID should be 2AB, MAP LOC (5,6) and Equipment (8).

When you have finished type (ESC/f1) three times to return to Menu 12. The screen should now be showing the name, division type and arrival turn of the HQ. The two asset battalions are also shown with their regimental attachment, name, type and arrival turn.

We will now create the panzer grenadier regiment. Select <REGT 1> then <HQ> then <EDIT>. Type (901 REG) (RET) (PZ GREN) (RET) (6) (RET) (6) (RET) (4) (RET) to create the regimental HQ.

Type (ESC/f1) twice then select <BN 1> then <EDIT>. Type (1) (RET) (4) (RET) (7) (RET) (2) (RET) (0) (RET) (3) (RET) (16) (RET) (8) (RET) (12) (RET) (0) (RET) (2) (7) (RET) (7) (RET). This has created the first battalion of the regiment. Since the second battalion is almost identical to the first we can make use of the <STORE> and <RECALL> feature. Type (ESC/f1) to throw the cursor into the <EDIT> menu. Select <STORE>. The current battalion can now be used as a template for the second.

HQ ID PZ LEHR		TYPE PANZER		HQ LOC (3, 7)	
(0-7)... Admin:: 7 Leadership:: 7 Supply:: 4		(0-31)... Movement:: 12 (0-63)... Arrival:: 2		EDIT CLEAR MAP STORE RECALL	
I D 1AB		MAP LOC (6, 6)			
(0-13)... Class:: 11 (0-3)... Mode:: 0 (0-31)... Equipment:: 9 Movement:: 14 (0-15)... Strength:: 11 Rating:: 13 Range:: 1 (0-63)... Arrival:: 2		armour ARM type normal PZ V (0-7)... Fatigue:: 7 (0-4)... Experience:: 6 Attached:: 1			

Fig 7. Battalion Creation Screen

Type (ESC/f1) and then select <BN 2> then <RECALL>. The details of battalion 1 have been filled in for battalion 2. Select <EDIT> and change ID to (2) and MAP LOC to (3,6). Type (ESC/f1) twice then select <BN 4>. This is the artillery battalion. Type (4) (RET) (1) (RET) (7) (RET) (13) (RET) (0) (RET) (19) (RET) (10) (RET) (4) (RET) (11) (RET) (13) (RET) (2) (RET) (6) (RET) (6) (RET).

That's all we have to create. Type (ESC/f1) three times to return to Menu 12 which should look like **fig 8**. Type (ESC/f1) until you return to Menu J (Master Create). Immediately save all your changes to disk using the <DISK> option.

5. THE DESIGN MENUS

This section describes the various menus together with explanations of their functions. The order in which they are presented represents a convenient sequence for the creation of a new scenario.

XX (2)	1	...	1AB	ARM	(2)	DIVISION REGT 1 REGT 2 REGT 3 REGT 4
	1	...	2AB	ARM	(2)	
...PZ LEHR		...		...	(...)	
...PANZER		...		...	(...)	
901 REG PZ GREN		...	1	ARM	(2)	
		...	2	ARM	(2)	
		...	4	ART	(2)	
		...		...	(...)	
		...		...	(...)	
		...		...	(...)	
		...		...	(...)	
		...		...	(...)	
		...		...	(...)	
		...		...	(...)	
		...		...	(...)	

Fig 8. Division Summary Screen

5.1 MAP DATA

5.11 Map Size (Menu 8)

The map size in *Battles in Normandy* is variable. Each map element is 13 hexes wide by 7 hexes deep. There may be up to three elements across (0-2) and four down (0-3). Thus, the maximum size of a battlefield is 39 by 28 hexes. At a suggested ground scale of 1 kilometre per hex, this represents an area of a little over 1,000 square kilometres.

In creating a scenario, map size *must* be set before anything else. Select the smallest map size that can comfortably support the action you wish to represent. Apart from being less work, smaller maps will mean faster games.

5.12 Define Terrain (Menu 7)

There are sixteen terrain shapes in *Battles in Normandy*. The shapes are predefined. However the names and the effects on both combat and movement



NAME	MOVEMENT (0-31)		COMBAT (0-7)		
	MECH	NON MECH	ARM	ART	INF
OCEAN	...	...	...	...	...
CLEAR	2	1	7	7	7
BOGAGE	12	4	1	4	5
HILLTOP	7	4	2	4	4
WOODS	6	2	4	5	7
	...	...	...	...	...
SWAMP	18	8	6	4	3
BEACH	8	4	7	6	6
AIRFIELD	2	1	7	7	7
DEFENCES	10	4	1	2	4
	...	...	...	...	...
CLIFFS	...	12	4	4	3
FOREST	10	3	3	3	5
	...	...	...	...	...
RUBBLE		3	2	3	3

Fig 9. Terrain Effects Chart

for any terrain shape are definable. It should therefore be possible to represent the ground conditions of any battlefield by judicious use of names and combat/movement effects. Use the (RET) key to advance the cursor through the screen.

Examine any (or all) of the game scenarios and the blank design form in Appendix A. As an example, we have selected the *Epsom* scenario. See fig 9.

Twelve of the 16 terrain shapes available have been used in this scenario. For each terrain shape you wish to use, enter a 1-10 letter name.

Every battalion in the game is assigned a movement allowance in the Troop Creation routines. The movement section of this display is used to determine how many movement points each type of terrain will cost when that battalion enters a hex of that type.

Mechanized battalions are those primarily moved by tracked or wheeled vehicles. Non-mechanized battalions primarily move on foot. Enter a number between 0 and 31. Note that 0 signifies the hex is impassable to that type of battalion and will appear on the screen as a dotted line.

		MOVEMENT (0-15)		COMBAT (0-7)					
		MECH	NON MECH	ARM		ART		INF	
	ROAD	1	1	+	+	+	+	+	+
	FORT	+	+	2		0		3	
	CITY	+	+	1		2		3	
(+)	BRIDGE	2	1	4		7		5	
(+)	RIVER	+	0	4		6		4	

		ADJACENT CONTROLLED HEX PENALTY (0-15)					
		(1)	(2)	(3)	(4)	(5)	(6)
(+)	ENEHY	0	0	0	0	1	2

		VPS PER STRENGTH POINT (0-15)	
		MECH	NON MECH
	AXIS	2	1
	ALLIED	1	2

Fig 10. Miscellaneous Factors

In the above example, <BOCAGE> terrain costs 12 MPs for mech bns and 4 MPs for non-mech bns. The terrain symbol in the upper left corner corresponds to the line currently being edited by the cursor.

Terrain affects combat by reducing the effectiveness with which an enemy battalion will attack a particular hex type. Since armoured, artillery and infantry units play a different role in combat, there is a separate effect for each type. Enter a value between 0 and 7. A value of 7 means that the terrain has no effect on combat. A value of 0 means an incredibly tough position to assault. From the same example you will note that mechanized units to attacking into bocage will have a tough time.

5.13 Define Misc Factors (Menu 6)

There are 3 components to this screen. Examine any (or all) of the game scenarios and the blank design form in Appendix A. As an example, we have selected the *Epsom* scenario. See fig 10.

1. Roads, Forts and Cities must have their movement and combat effects defined in the same way as terrain types. Note that forts and cities cannot affect movement and roads cannot affect combat. Mechanized units cannot cross rivers except at bridges. Notice how forts, as defined, severely reduce the combat effectiveness of all three troop types.

2. Every hex on the map is controlled either by the Axis or Allied player. This is set when the scenario is created. Control changes when a battalion enters an enemy controlled hex. This change is automatic except for enemy forts and minefields. They take a variable amount of time to demolish/clear and until rendered ineffective they will function as normal for their original owners. In essence, you do not really control a fort or minefield hex until you have cleared that hex. Hexes occupied but uncleared at the end of the game will not earn victory points.

Progress is always slower when moving in enemy territory. Just how much slower is determined by the values entered for adjacent enemy controlled hexes. The parameters from (1) to (6) are the number of surrounding hexes which are enemy controlled. The values underneath each parameter which may range from 0 to 15 specify the movement point penalty, for entering a hex surrounded by any particular number of enemy hexes. From the example in **fig 10**, hexes surrounded by 1 to 4 enemy controlled hexes suffer no penalty. Those hexes surrounded by 5 or 6 enemy controlled hexes suffer a 1 MP penalty.

3. The size of a battalion is measured in strength points as described in the Troop Creation routines. Each player receives victory points for destroying enemy battalion strength points. A value between 0 and 15 must be entered for both the mech and non-mech categories. The AXIS line reflects the number of VPs earned by the Allies for killing Axis strength points in each category.

5.14 Map Create Utility (Menu 9)

It's probably a good idea to make a draft version of your battlefield before completing the rest of the map data. However, we strongly advise you not to edit the map screen until all the information in Menus 6-8 has been compiled and entered into the program.

A 13 hex by 7 hex section of the map will appear. In the 4 lines of text below the map you will find the hex co-ordinate of the cursor's current location, the name of the hex type and which nationality controls it. There is a schematic display of the map in the lower right which indicates the map size and the current location of the cursor in relation to the full map.

There are 16 terrain types which can be entered. River and bridge hex-sides can be entered. Roads, cities, forts and minefields can be added to a hex in any combination. Every hex must be identified as Axis or Allied.

The I,J,K,M and 1-6 keys will move the cursor around the chosen battlefield. 0 will centre the screen on the cursor.

To create a terrain type in a hex, type (T)(n) where n = a number between 0 and 15. Please see the blank terrain effects chart in Appendix A. Note that the second terrain type (the clear icon) requires you to type (T) (1) (RET). This is to distinguish it from terrain types T10-T15.

To add a road, city, fort or minefield to the hex, type (R), (C), (F) or (M) while the cursor is over the hex. Note that Cntl (R), Cntl (T), Cntl (F) or Cntl (M) will temporarily remove that type of icon from the screen. Re-typing the Cntl (key) will restore the icons.

To create a river hex-side, you must type three keys. The first is (S). This identifies a hex-side. The second is a number between 1 and 3. This identifies north, north-eastern and south-eastern hex-sides respectively. Note that the south hex-side of one hex is the north hex-side of the hex directly below it. In this way, all 6 hex-sides can be edited. The third is a number between 1 and 2. (1) identifies a river. (2) identifies a bridge. Type (S0) to clear all hex-sides from a particular hex.

To set control of a hex to Axis or Allied, type (RET) to bring up the map menu and select <SET SIDES>. Select <AXIS> or <ALLIED> as appropriate. All hexes, except T0s, will have their terrain icon replaced by the Axis or Allied control icon. As the cursor moves, it will leave a trail of the appropriate control icons behind it. To change control, type (RET) to bring up the map menu and select <RESET ALL>. You are back at square 1 and can repeat the procedure using the other control icon. When editing hex control from scratch, the default value is Axis.

For convenience, you can set the cursor to automatically produce a terrain shape. With the cursor flashing on the chosen terrain, type (RET). This brings up the map menu in the bottom right of the screen. Selecting <SET SHAPE> from this menu will lock the current terrain shape to the cursor. You may now move the cursor and the selected shape will be created wherever the cursor is moved. Type (RET) again to go back to the menu and select <RESET ALL> to turn off the shape.

We suggest you keep the map size as small as possible for your first original scenario.

All maps are compromises between the actuality of the terrain and its representation. Do not feel afraid to be creative with terrain to make the map work properly within the game system.

5.2 UNIT DATA

5.21 Troop Creation (Menu 14)

Examine the blank division roster in Appendix A. One of these should be prepared for each division in the game. Do not attempt to edit the screen until these rosters have been completed.

Armed with your completed roster and using the information in Chapter 4 (Varying a Scenario), you can create the units in the division.

The following notes will explain the factors which must be valued or rated. See **fig 7** for a partial example. A design perspective is attempted in the Design Overview at the end of this section.

Headquarters

HQ I.D. Enter a 1-8 character name to identify the division or regiment.

UNIT TYPE. Enter a 1-8 character name to describe the type of division or regiment.

HQ ADMIN. Enter a value between 0 and 7. Admin affects the efficiency of every function the HQ carries out. The higher the value, the better. Divisional HQ admin never varies in the course of a game. Regimental HQ admin rises and falls in response to the current situation.

LEADERSHIP. Enter a value between 0 and 7. Leadership is always important in battle. The higher the value, the better. Neither divisional HQ leadership nor regimental HQ leadership will change in the course of a game. Both are important to the effectiveness of a formation.

HQ SUPPLY. Enter a value between 0 and 7. Divisional HQ supply is fixed in each scenario and represents the overall supply status of the formation. Regimental HQ supply usage is dependent upon combat while resupply is dependent upon the divisional supply value.

The more fighting (especially assaulting or exploiting) that a unit does, the greater the supply consumption. An adequate regimental HQ supply level is vital for effective combat. Values between 4 and 7 are satisfactory for all purposes, values of 2 or 3 will result in certain penalties in combat while values of 0 and 1 are disastrous. Thus a unit with very low divisional supply will be severely restricted in the amount of effective combat it can undertake.

HQ MOVEMENT (XX HQ ONLY). Enter a value between 0 and 31. Regular divisions with the usual provision of wheeled or horse-drawn vehicles should be given a movement allowance at least equal to the mech. min. value, even if they are basically leg infantry divisions. Only those divisions such as airborne and marine which arrive by an air or amphibious route should have a movement allowance lower than the mech. min. Resupply by XX HQs with a movement allowance lower than the mech. min. will not be as good as their conventional brethren in most circumstances. Resupply across rivers is less restricted for XX HQs with a movement allowance lower than the mech. min. If a unit was tied to a single supply source (such as Airborne divisions and their drop zones), consideration should be given to using a zero movement point HQ to reflect this.

ARRIVAL (XX HQ ONLY). Enter a number between 0 and 63. This is the turn that the divisional HQ will arrive on the map. An arrival number of 0 means the HQ begins the game deployed on the map. Units without a divisional HQ will have no line of supply. Delaying the arrival of a HQ beyond that of its battalions is a very

useful way of restricting the operations of units until an appropriate time. In the Utah scenario, the HQs of the first two Allied divisions arrive two days after most of their troops, reflecting the confusion and delay of the first few days.

LOCATION (XX HQ ONLY). Enter the x,y map co-ordinates of the HQs start hex.

Battalions

UNIT I.D. Enter a 1-3 character name to identify the battalion.

LOCATION. Enter the x,y map co-ordinates of the battalion's start or arrival hex. Note that amphibious reinforcements must be given an ocean hex adjacent to the intended beach-head. Do not place two battalions in the same hex if they both have a 0 movement allowance.

CLASS. Enter a number between 0 and 13. These 14 numbers correspond to the fourteen different types of battalions you may create. Chapter 3 of the Game Routines shows a screen illustration of each type. 0 = leg infantry, 1 = motorized infantry, 2 = mechanized infantry, 3 = paratroopers (airborne infantry), 4 = heavy weapons or mortars, 5 = cavalry, 6 = reconnaissance, 7 = engineer, 8 = anti-air, 9 = anti-tank, 10 = tank destroyer, 11 = armour, 12 = assault gun, 13 = artillery.

Numbers 0-1,3-9 are INFantry types, 2,10-12 are ARMour types and 13 is an ARTillery type. These are the three types of units defined by the combat routines.

MODE. Enter a number between 0 and 3. This number determines the mode of entry of a battalion. 0 = normal; the battalion begins on the board or arrives as a reinforcement in the normal fashion. 1 = airborne; the battalion begins the game just landed by air drop or arrives as a reinforcement by air drop. 2 = air landing; the battalion begins the game just landed by air transport or arrives as a reinforcement by air transport. 3 = amphibious; the battalion begins the game at sea adjacent to a beach-head or arrives as a reinforcement in an ocean hex.

Units in normal mode will start or arrive on their designated entry hex. If it is blocked by another unit, they will not arrive until the hex is vacated. Units in parachute mode will arrive on any hex within 2 hexes of their designated entry hex. If there is no vacant hex inside this radius, they are destroyed. Units in air landing mode will start or arrive on their designated entry hex. If it is blocked by another unit, they will not arrive until the hex is vacated. Units in amphibious mode will arrive on any coastal hex within 2 hexes of their designated entry hex. If there is no vacant hex inside this radius, they will wait offshore until there is one.

EQUIPMENT. In Menu 15 you are asked to describe, with a 1-8 character name, the types of equipment/troops used by your corps. This facility makes the identification of friendly units much easier. The name itself is not used by the program; it is simply a mechanism to increase the recognition level of a battalion. There is space to list 31 items of equipment and/or troop types. Number 0 is always blank. Enter the number corresponding to the appropriate equipment.

Once you've had some experience with these routines, we recommend you prepare Menu 15 before Menu 14.

MOVEMENT. Enter a number between 0 and 31. This is the number of movement points the battalion will have available for each turn. Note that you must co-ordinate this number with the mechanized minimum value from Menu 19 (Scenario Details). All battalions with a movement allowance greater than or equal to the chosen mechanized minimum value will be treated as mechanized units; all others will be treated as non-mechanized.

STRENGTH. Enter a number between 1 and 15. (You can enter 0, but if you do it won't appear in the game). For infantry and armour types, a full strength company is equal to 3 strength points (SPs). A depleted company is worth 2 SPs and a remnant company worth 1 SP. Look to make a typical battalion at full strength between 9 and 12 SPs, and adjust all other units relative to this benchmark. For artillery types, 3 tubes is equal to 1 SP.

RATING. Enter a number between 0 and 15. This number is a subjective evaluation of the quality of the equipment and organization of the battalion. For example, the rating of a Tiger tank battalion would be 12-15 depending on the scenario while a Matilda tank would be lucky to rate 1 in any circumstances.

Infantry, armour and artillery type battalions should be rated on separate scales. The combat mechanics take care of the inter-relationships.

RANGE. All direct attack types of infantry battalions should have a range of 0. All supporting types of infantry battalions should have a range of 1. All armour type battalions (except mechanized infantry) should have a range of 1. A unit with a range of 1 is automatically more effective in combat than an otherwise identical range 0 unit. All artillery type battalions should have a range equal to the effective distance at which they could engage the enemy. The maximum range is 15.

ARRIVAL. Enter a number between 0 and 63. This is the turn that the battalion will arrive on the map. An arrival number of 0 means the battalion begins the game deployed on the map.

FATIGUE. Enter a number between 0 and 7. 0 = totally exhausted, 7 = bright-eyed and bushy-tailed.

EXPERIENCE. Enter a number between 0 and 7. 0 = green and pretty well useless, 7 = elite troops of the highest quality. The average regular battalion should have an experience between 3 and 5.

ATTACHMENT (XX ASSETS ONLY). Enter a number between 0 and 4. This number will identify which regiment of the division has currently been assigned the particular asset battalion. A number of 0 indicates that the asset is in reserve.

Note that all asset battalions which are intended as reinforcements should be assigned to a regiment when created and *not* placed in reserve. This will stop them from clogging up a reinforcement hex while they get their bearings.

A Design Overview

Units

Sure there's a lot of numbers, but don't panic. Almost all of the effects of these numbers are relative. In other words the actual numbers are often not as important as the relationships between them.

Lets look at the example of the Panzer Lehr division and the opposing British 7th Armoured from the Villers-Bocage scenario. A portion of the Pz Lehr is shown in **fig 1** but you should have a look at the both divisions using the creation kit.

The Pz Lehr has divisional admin and leadership values of 7. You can't get better than this. Its regimental values are typically 6 or 7. The 7th Armoured has divisional values of 4 and 5 and some regimental values as low as 2. This reflects our belief that the Pz Lehr was a superbly organized fighting machine. Everybody knew the right thing to do. This is not the case with the 7th Armoured.

Even if the 7th Armoured had identical battalions to the Pz Lehr, it would not fight as well. However, its battalions are not identical. Its Cromwells and Shermans have ratings of 7 to 9. The Panzer IVs are 11 and the Vs are 13. So the Pz Lehr has better equipment.

Lastly, the men of the Pz Lehr are all elite, either 6 or 7 experience. The 7th Arm. are veterans, usually 4. With a superiority in all the critical categories, its easy to see that the Pz Lehr will perform better. However, if the 7th Armoured retained the same actual values but were facing say an Italian armoured division, it would probably have the same margin of effectiveness as the Pz Lehr currently enjoys.

The elements considered above can be considered to show the book value of a unit. Their actual combat value will determined by conditions on the day. Poor supply, admin and fatigue values can bring the best formation undone.

Combat

The various battalion types, as defined by the CLASS entry under Battalions, have different effects in the combat routines. Choice of the CLASS for a unit should bear these in mind. The types are listed below.

0 = leg infantry, 1 = motorized infantry, 2 = mechanized infantry, 3 = paratroopers (airborne infantry), 4 = heavy weapons or mortars, 5 = cavalry, 6 = reconnaissance, 7 = engineer, 8 = anti-air, 9 = anti-tank, 10 = tank destroyer, 11 = armour, 12 = assault gun, 13 = artillery.

Numbers 0-1,3-9 are INFantry types, 2,10-12 are ARMour types and 13 is an ARTillery type.

Any combat having both the INF types 0-3,5-7 and ARM types 11-12 gains a combined arms bonus. When defending, there is an additional bonus for the

presence of an anti-tank type unit (8-10). Any unit with a range greater than zero gains a bonus when used in conjunction with a 0 range unit.

For example, a US infantry regiment usually mustered three infantry battalions and an artillery battalion. The heavy weapons and mortars were in separate companies organic to the infantry battalions.

To represent the supporting fire of these companies, enter a range value of 1 for one of the infantry battalions. This will ensure that the combined arms bonus is realised. Note that the artillery bonus is in addition to the above.

The presence of ART or OBS also confers a bonus, irrespective of the actual effectiveness of those points. ART and OBS points work with full effectiveness only in <ASSAULT> or <EXPLOIT>. All other orders are only 50% effective.

Engineer units ignore terrain when they attack, and are hence extremely useful for attacking forts.

Supply consumption is dependent on the level of fighting a unit engages in. Normal resupply depends on regimental and divisional admin and divisional supply.

There must also be a Line of Supply (LOS) between the regimental and divisional HQs and the Div HQ must not be adjacent to any enemy unit. If there is no LOS then resupply can still occur but at much reduced levels.

5.22 Equipment Roster (Menu 15)

The use of this menu has already been explained in the previous section.

5.23 Axis/Allied Objectives (Menu 16)

Axis and Allied objectives are created in the same way. Examine the blank objective chart in Appendix A.

Each side may have a maximum of 12 objectives. The <FORWARD> and <BACK> lines in the menu window are used to bring up the next objective. The <EDIT> line is used to enter the objective and set its parameters. The <MAP> line is an alternative method of positioning the objective on the map.

Each objective must be given a 1-11 character name and an x,y map location.

Victory points can be awarded for the possession of an objective on a turn by turn basis throughout the game and/or at the end of the game. When awarding points throughout the game, you must select the turn that point scoring will begin and the turn on which it will end.

If you wish to create an objective simply as a signpost for the direction of your troops, then don't assign any VPs for its possession. The Objective or Enemy II commands are the only way to move men freely around the map. If you want troops to go somewhere, put in an objective.

5.3 BRIEFING

5.31 Corps Details (Menu 18)

Examine the blank briefing form in Appendix A as well as any of the scenarios.

For each nationality you must enter a 1-16 character name for the Side, the Corps and the Commander.

Support points are assigned in two categories; those available in daylight turns and those available at night. Each point of air support is equivalent to 1 SP of artillery. Reliability measures how likely the support points are to be available for use each turn. 0 = unlikely, 3 = almost certain. Rating is a measure of the effectiveness of the support.

Air superiority is measured on a scale of 0-7. 0 = strong Axis, 7 = strong Allied. Reliability measures how likely this air superiority is to remain throughout the scenario. A reliability of 0 means the air superiority condition could fluctuate frequently throughout the scenario. A reliability of 7 means there is little chance of any change to the air superiority condition.

5.32 Scenario Details (Menu 19)

The blank briefing form in Appendix A illustrates this routine.

Enter a 1-16 character name for the scenario. There are up to three 26 character lines you can use for a sub-title to the scenario.

Enter the turn, day, month and year that the scenario begins.

Enter the number of days the scenario will last. The maximum is 16. Every game ends on a pm turn.

Enter the initial weather. 0 = precipitation (rain or snow as appropriate), 1 = heavy overcast, 2 = light overcast, 3 = clear. Note that this is atmospheric weather only. Precipitation will slow down troop movement but to reflect permanent bad ground conditions such as deep mud or snow which persist even after the precipitation has stopped, you will need to make some provision in the terrain effects chart.

Enter the current weather forecast. 0,1 = stormy, 2,3 = building, 4,5 = stable, 6,7 = clearing.

Enter the climate. This sets the basic parameters on which the weather forecast will operate to produce the weather. The default type 0 is European, identical to the **Battlefront** system. The other climates are Arid, (suitable for desert battles), Monsoon, Tropical, Arctic (clear only 25% of the time, cloudy or precipitation the rest) and Temperate (perfect weather, just like Sydney).

Enter the Mech. Min. All battalions with a movement allowance greater than or equal to this number pay mechanized terrain costs. All others use the non-mechanized values.

6. DESIGNERS' NOTES

Compatibility

The following is a list of differences between *Battlefront* and *Battles in Normandy*. They are mainly changes for design convenience. The implications for using scenarios created under the *Battlefront* system with *Battles in Normandy* are noted.

The new factor for climate has been introduced. Its effect will create different distributions of the four weather types. *Battlefront* scenarios will use their original system, now called European.

Units with no LOS will now have a chance at receiving resupply. This will make having no LOS less disastrous than before.

Scenarios may now start on any of the four turns on a particular start date. This turn will be the first player turn but will retain the appropriate turn number. Thus a scenario starting on the night turn will be considered to start on turn 4. *Battlefront* scenarios will start on the am turn as normal. Turn numbers for reinforcements or VPs will not need to be adjusted.

HQs have been given a separate movement allowance. *Battlefront* scenarios will continue to use the Mech. Min. value.

Artillery and OBS points now only function at full effectiveness when used in conjunction with assaults and exploits. At all other times it functions at half effectiveness. This may or may not make a difference to play balance, depending on the scenario.

An extra defensivecombat bonus has been created for units with infantry, tank and anti-tank elements present. Units created as type 8, 9 or 10 should be checked to see if they qualify for this bonus.

Overall, compatibility works like this. *Battlefront* scenarios will run under *Battles in Normandy*. Artillery and OBS points may very occasionally need to be changed. A *Battles in Normandy* scenario will run under the *Battlefront* system with the additions being ignored. Any points of major interest will be noted in *Run 5*.

In short, no matter what combination of master and scenario/save game disks you use, your computer will know what to do.

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Roger Keating and Ian Trout
Sydney, Australia
May 1987

BRIEFING

AXIS		ALLIED	
SIDE [16]	SIDE [16]	SIDE [16]	SIDE [16]
CORPS [16]	CORPS [16]	CORPS [16]	CORPS [16]
COMMANDER [16]	COMMANDER [16]	COMMANDER [16]	COMMANDER [16]
DAY	NIGHT	SUPPORT	DAY NIGHT
QUANTITY (0-99)			
RELIABILITY (0-3)			
RATING (0-15)			
AIR SUPERIORITY (0-7)			
STATUS = ☐			
RELIABILITY = ☐			

SCENARIO [16]	
BRIEFING [26]	
START DATA	
(0-3)	START = ☐
(1-31)	DATE = ☐
(1-12)	MONTH = ☐
(0-53)	YEAR = ☐
(1-16)	LENGTH = ☐
(0-3)	WEATHER = ☐
(0-7)	FORECAST = ☐
(0-7)	CLIMATE = ☐
(0-31)	MECH MIN = ☐

TERRAIN EFFECTS CHART

TERRAIN CODE (T0-T15)	TERRAIN NAME [10]	TERRAIN COSTS PER HEX		ATTACK EFFECTS		
		MECH (0-31)	NON-MECH (0-31)	ARM (0-7)	ART (0-7)	INF (0-7)
T0						
T1(RET)						
T2						
T3						
T4						
T5						
T6						
T7						
T8						
T9						
T10						
T11						
T12						
T13						
T14						
T15						
-	ROAD					
-	FORT					
-	CITY					
-	BRIDGE					
-	RIVER					

APPENDIX A

DIVISION ROSTER

SCENARIO		Nationality		1st Ind		II		II		3rd Ind	
XX Division				2nd Ind		II				4th Ind	
HQ											
III 1st Regt		III 2nd Regt		III 3rd Regt		III 4th Regt					
HQ		HQ		HQ		HQ					
II 1st Bn		II 1st Bn		II 1st Bn		II 1st Bn					
II 2nd Bn		II 2nd Bn		II 2nd Bn		II 2nd Bn					
II 3rd Bn		II 3rd Bn		II 3rd Bn		II 3rd Bn					
II 4th Bn		II 4th Bn		II 4th Bn		II 4th Bn					

HEADQUARTERS DATA

FORMATION		XX HQ	1/RHQ	2/RHQ	3/RHQ	4/RHQ
HQ I.D.	[8]					
UNIT TYPE	[8]					
HQ ADMIN	0-7					
LEADERSHIP	0-7					
HQ SUPPLY	0-7					
MOVEMENT	0-31		N/A	N/A	N/A	N/A
ARRIVAL	0-63		N/A	N/A	N/A	N/A
LOCATION	(x,y)		N/A	N/A	N/A	N/A

BATTALION DATA

FORMATION	I/II	1/1	2/1	3/1	4/1	1/2	2/2	3/2	4/2	1/3	2/3	3/3	4/3	1/4	2/4	3/4	4/4	1/-	2/-	3/-	4/-
UNIT I.D.	[3]																				
LOCATION	(x,y)																				
CLASS	0-13																				
MODE	0-3																				
EQUIPM'T	0-31																				
MOVEMENT	0-31																				
STRENGTH	0-15																				
RATING	0-15																				
RANGE	0-15																				
ARRIVAL	0-63																				
FATIGUE	0-7																				
EXPERIENCE	0-7																				
ATTACHM'T	0-4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

OBJECTIVES AND MISC. FACTORS

I.D.	NAME [11]	MAP LOC [x,y]	START (0-63)	END (0-63)	POINTS PER TURN (0-30)	POINTS AT END (0-255)
1(AX)						
2(AX)						
3(AX)						
4(AX)						
5(AX)						
6(AX)						
7(AX)						
8(AX)						
9(AX)						
10(AX)						
11(AX)						
12(AX)						
1(AL)						
2(AL)						
3(AL)						
4(AL)						
5(AL)						
6(AL)						
7(AL)						
8(AL)						
9(AL)						
10(AL)						
11(AL)						
12(AL)						

ADJACENT ENEMY HEX PENALTY (0-15)

1st HEX = 4th HEX =
 2nd HEX = 5th HEX =
 3rd HEX = 6th HEX =

VICTORY POINTS PER STRENGTH POINT ELIM. (0-15)

	MECH	NON MECH
AXIS		
ALLIED		

MAP SIZE

ACROSS
(0-2)
 DOWN
(0-3)

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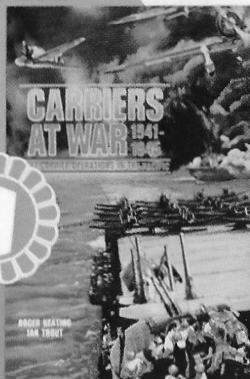
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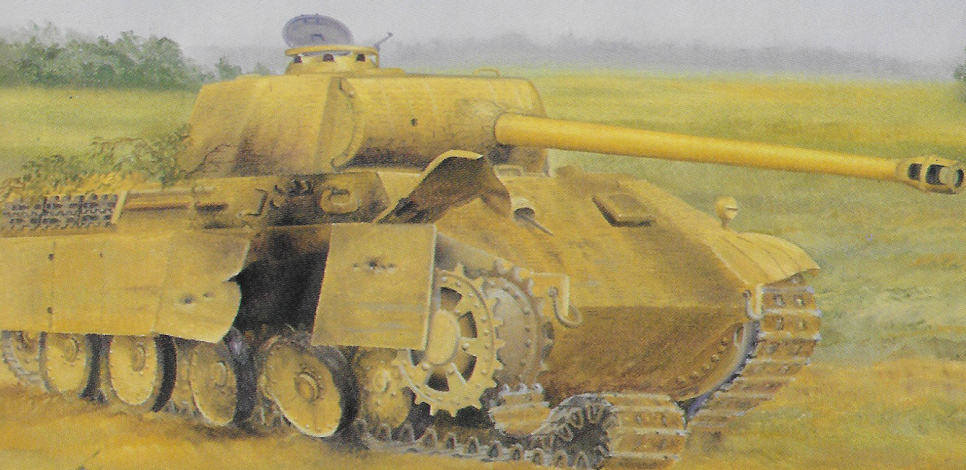


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